

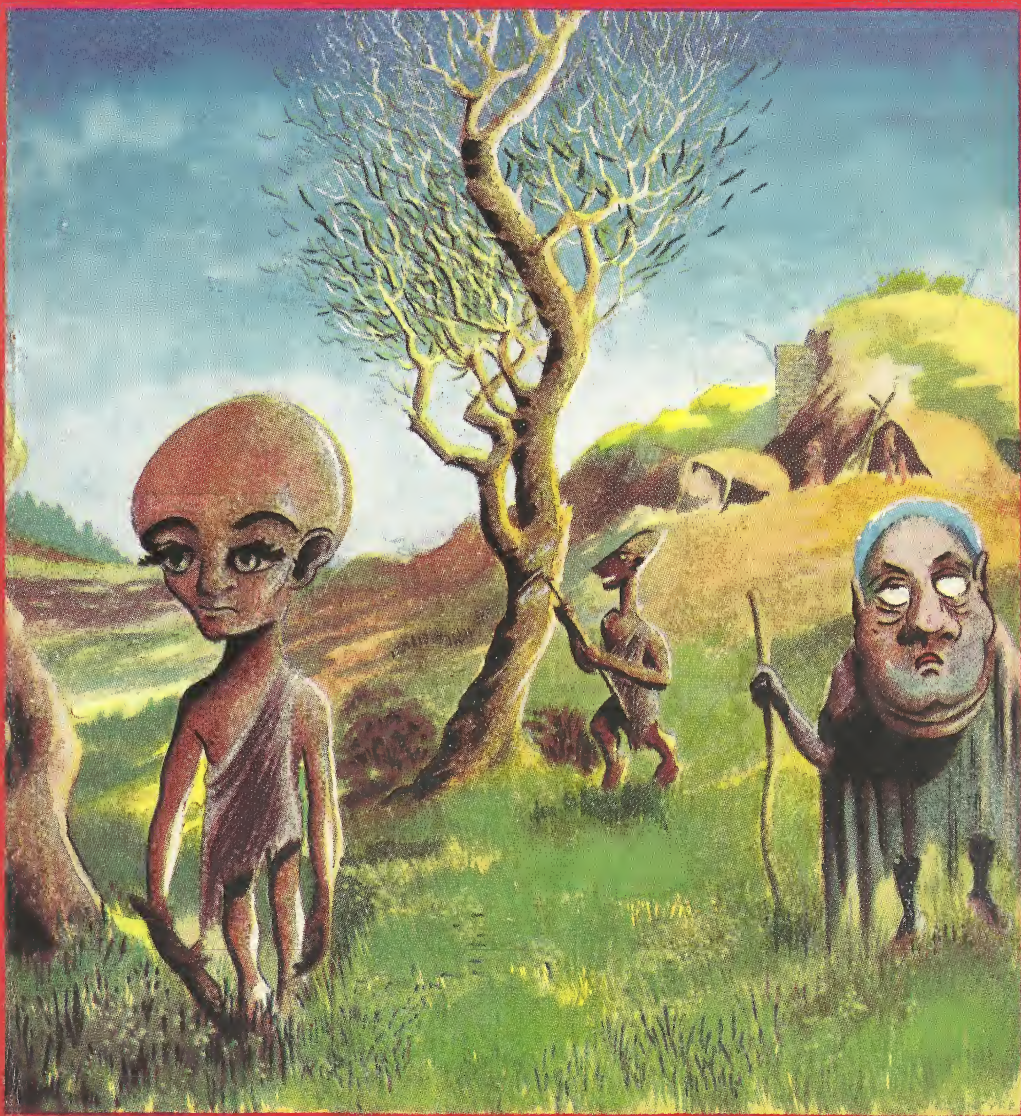
NEBULA

BI-MONTHLY

2/-

SCIENCE FICTION

NUMBER 14



AFTER THE NEXT WAR . . .

ALL over the world...

People are enjoying NEBULA. Here are a very few of the hundreds of unsolicited letters of comment received from abroad

U.S. ARMY, KOREA

There are few pleasures available here in Korea and reading your excellent magazine is one of the greatest... I feel that it is now up with the best produced on this side of the Atlantic—and Pacific, too! *Sgt. Peter M. Evans*

AUCKLAND, NEW ZEALAND

Congratulations, yours is the only science-fiction magazine which contains anything like a satisfactory blend of scientific accuracy and really enjoyable reading. *Arthur Frew, B.Sc.*

CALIFORNIA, U.S.A.

I congratulate you on the excellent magazine you publish, it is easily the best on the market today. . . . I have enjoyed every story . . . all are above the average of today's offerings and I subscribe to twenty-two current publications. *Harry Petzwall*

MELBOURNE, AUSTRALIA

I think your magazine is a magnificent publication and at present the best in the field of British Science-Fiction.

N. A. Jackson, Jr.

KENTUCKY, U.S.A.

. . . Along with "Punch" and the "Manchester Guardian Weekly" your magazine adds to our admiration and enjoyment of things British. *Rev. Richard B. Hunter*

These are the opinions of foreign readers—it's even more popular in Britain! EVERYONE joins in saying . . .

NEBULA stands Supreme

NEBULA

SCIENCE FICTION

Edited by PETER HAMILTON

Issue Number Fourteen

Novel:

SUNSET Kenneth Bulmer 61

Novelette:

PUSHOVER PLANET James White 3

Short Stories:

THE BEAUTIFUL MARTIAN Sydney J. Bounds 23

QUIS CUSTODIET E. C. Tubb 28

QUESTION ANSWERED Mark Trent 41

DOWN, ROVER, DOWN ... Eric Frank Russell 49

Special Features:

Look Here The Editor 2

Universe Times Two John Newman 95

The Facts About Hypnotism W. H. Powers 99

Something To Read Kenneth F. Slater 103

Scientifilm Previews Forrest J. Ackerman 105

Fanorama Walter A. Willis 107

Guided Missives The Readers 109

Front Cover by Kenneth McIntyre Back Cover by Arthur Thomson

Black and White Illustrations by Thomson, Frew, Greengrass and Turner

NEBULA SCIENCE FICTION, price Two Shillings, is printed in Scotland by The Munro Press, Ltd., Perth, and published by Peter Hamilton at 159, Crownpoint Road, Glasgow, S.E. This edition was published in November, 1955.

Subscription Rates in Great Britain and the British Commonwealth: Six issues, 12/- Stg.; Twelve issues, 24/- S.g. In the U.S.A. and Canada, Six issues, \$2.00; Twelve issues, \$4.00. All Rates Post Free.

Sole distribution rights for Australia and New Zealand have been granted to Messrs. Gordon & Gotch (Australasia) Ltd.

No responsibility can be accepted for loss or damage of unsolicited mss or artwork and while these are invited, adequate return postage should always be enclosed.

All characters and events in these stories are entirely fictitious. Any resemblance to persons living or dead is purely coincidental.

Look here . . .

I think you will agree that I have an interesting and varied selection of stories for you this time—many of them by authors who have brought us a great deal of pleasure in the past and who will, I am sure, do so often in the future.

Our lead novel this time is by a complete newcomer to our pages, but I think when you have read "Sunset" by H. K. Bulmer, you will want to see him again. This story is, in my own opinion, an excellent piece of science-fiction writing, presenting as it does a cleverly conceived yet extremely credible possible future of our present society as a background against which convincingly human characters act out the grimly logical plot.

Another author of whom you will be anxious to see much more is James White, who has successfully infused a new and refreshing flavour into the by now familiar "alien invasion" theme of our novelette "Pushover Planet". In this yarn he lets us see things from the aliens' viewpoint with interesting results.

Three of the short stories are by authors who headed the 1954 Nebula Popularity Poll and it seems that they intend to hang on to the top positions this year, also. E. C. Tubb, who has *not* allowed his recent article in a popular weekly news magazine to go to his head, presents us with an outstanding little psychological story which advances an interesting theory regarding race consciousness; while Eric Frank Russell points out a few of Man's vices and virtues and pronounces a logical verdict; and Sydney J. Bounds writes a little cameo classic about which I am able to say little except that *I* found it fascinating and memorable reading.

In past issues of NEBULA it has been my policy to keep the accent on first-rate story material and I have, perhaps, tended to neglect the serious type of scientific article. However, in the last few months I have been receiving more and more requests for this type of thing and so, purely as an experiment, I give you two scientific articles of very different types in this issue. If you would like more of this kind of thing in future editions of NEBULA, or even one in each issue, I'll be pleased to hear from you.

Well, I have given you a brief round-up of this issue's stories: why don't you drop me a line with *your* reactions?

* * * *

Every NEBULA reader cannot fail to be overjoyed by the recent news that all the major world powers are now competing in the speedy production of "Space Satellites" by means of which they intend to commence the preliminary exploration of space.

We can only hope that this news, inspiring as it is, will not mean the beginning of a mad scramble by the world's militarists to perpetuate and intensify their reign of terror over the rest of Mankind by building bomb-bases on the Moon, the planets and in space itself. It is to be

Concluded on page 112

Pushover Planet

The Aliens demanded quick and peaceful submission—while victory was still worth having

Illustrated by Arthur Thomson

The fleet came in fast—from the direction of the Crab Nebula—and decelerating at a rate which made it fearfully evident that the ships contained nothing resembling Human life. Still braking furiously it passed within three million miles of Mars, ignoring the tiny colony there and continuing to head sunwards. It passed the Sun within the orbit of Mercury, then headed outwards again, towards Earth.

Decelerating savagely into a tight orbit they swept around Earth twice. Two sub-fleets from the main armada—eight fat, shiny torpedoes surrounded by a silvery mist of scoutships—peeled off and screamed deep into the Earth's air envelope. Eight cities died in the fury of nuclear fusion reactions as a demonstration of the futility of resistance.

The ships met no resistance, anywhere.

The raiders hurtled upwards to rejoin the main fleet, pulverising a cargo dumb-bell which was crawling into its transfer orbit and unlucky enough to be in their way. The fleet reformed and headed for the Moon. The potential resistance from the domed settlements there was neutralised by more atomic bombs, then it landed on a great, pumice plain, adopting the defensive formation of concentric circles.

In a nearby crater there were three geologists busy staking out a new mine. These they took alive. One of them was allowed to stay alive. This was because, in the present unusual circumstances, a speaking representative of the enemy would be a big help.

Crellegnan dur Shan, Fleet Commander of the thirty-ninth Planter Expedition, Parent of Sixty-four, and Citizen with Privilege of the Greater

Empire of Lednang, looked at the entity standing before him and felt extreme distaste. Like most low-gravity creatures it balanced on only two lower, relatively strong limbs; and it was soft, flabby. In all his extremely long life the Commander had rarely seen a more horrible specimen. An uncontrollable shudder of revulsion shook him, sending quick undulations racing along his eight, hard-muscled tentacles.

The creature's eyes followed the movement, its face muscles writhed, and the sickly pink pigmentation of its skin became several shades lighter. Obviously the appearance of the Commander's highly-trained physique was arousing similar feelings in it. Dur Shan spoke first.

"What is your name, please, and rank or title?"

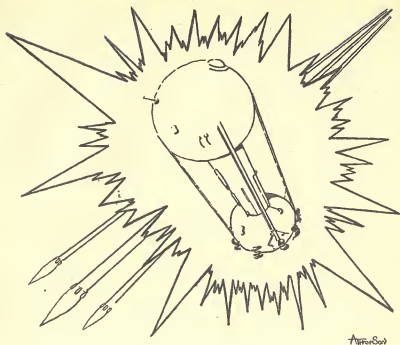
The effort of saying "please" to the creature nearly killed him, but he said it. Mentally cursing the near-catastrophic series of misfortunes that had necessitated a Lednang Fleet Commander using diplomacy instead of force, he watched the creature through the transparent wall separating them and waited impatiently for the reply.

"Murchison," came the answer shakily, "I am a . . ."—The closest the Translator could come to it was 'A Student of Rock Formations'—"*. . . and we do not use titles.*" The voice rose in a questioning note. "But . . . but you're speaking *English!* W-why is that?" The tone changed again abruptly. "And what happened to Quigley and Williams? If you've hurt them I'll——"

Questions—and threats—from this!

"Silence!" the Commander roared, then he caught himself sharply. Diplomacy; he mustn't frighten the thing too much. He forced his voice down to a more normal pitch and went on: "I will explain, Murchison. I do not speak English, whatever that is, but this Translator——" He indicated the mechanism with a lightning flick of a tentacle, "——which is attuned to your type of nervous system, breaks down my words into a series of basic sounds on to which my meaning has been mentally impressed, and you think you hear me speak in your own tongue. The effect is, of course, reversible. The operating principles of the Translator are naturally beyond your understanding, but electronics, micro-surgery, and a form of aural hypnotism all contribute to its functioning.

"This is the reason for the absence of your companions. In order to calibrate the Translator efficiently for you, we were forced to investigate the Human body organisation on the physical as well as on the psychological level. In the process both specimens were damaged irreparably. However," the Commander offered as a friendly gesture, "If they were related to you, you may have a small bone from each as a Memory Piece——"



"You beast," said the creature slowly. "You dirty b——" There was much more—most of it unintelligible—but the Commander got the general drift of it. Not only had his gesture of sympathetic friendship been rebuffed, but the Human was adding insults to this injury—and insults of a very personal nature.

It was amusing, almost. But he had too much on his mind to spare the time to enjoy the situation.

"Enough!" he interrupted harshly. "Your insults are meaningless, based as they are upon relationships occurring only in a bi-sexual race. However, you have made it clear that you dislike me."

He paused, wondering what would be the best way to present the situation to this Human. A Lednang was polite only to superiors. Asking this pallid, over-talkative slug for assistance was so foreign to his nature that he would have much preferred a Death with Honour. But he could not end his own life; at least, not just yet. There were close on half a million individuals, members of the Expedition, depending on him.

"This dislike is regrettable," he resumed. "But it does not alter

matters as they affect you and your race. You are very fortunate, though you don't know it, in being offered the chance to make terms. So that you will realise your good fortune I will explain the situation as it affects your world and the creatures on it.

"Briefly," the Commander began, "I am here to plant a colony. I have a fleet of two thousand transport and fighting units; you have, in comparison, nothing. I know this to be so by observation and experiment. When I first approached your planet, two flotillas were detailed to test your defenses, to draw your fire. They drew no fire, though they reduced several of your cities in an attempt to goad you into retaliatory action. The attempt failed, and, when all the reports were in, I knew why.

"There were no defenses."

And that, the Commander knew, had been a colossal piece of good fortune. As he went on he gave fervent thanks that this race, besides being defenseless, was also non-telepathic.

"The land and sea surface has been scanned minutely, and photographed. Nowhere is there a sign of either surface or atmosphere craft carrying any form of armament. You do not, in fact, appear to have any form of military organisation at all. Your civilisation is spread thinly and evenly in village-sized communities across your planet. Your so tall and imposing cities—including the ones we destroyed—are practically deserted. From all this there is only one conclusion that can be drawn.

"When a race forsakes its proud, sky-reaching cities and hugs itself to the soil again; when it becomes so moribund that, lacking an extra-planetary enemy, it refuses even a mild internecine struggle, that race has become decadent, and useless——"

"But we have space travel, and atomic pow——" The Human bit the protest off in mid word, as if it had almost said too much.

"True," the Commander agreed when it was obvious that the Human wasn't going to say anything else. "You have space travel—if you can call spaceships chemical-powered fuel containers and those slow, flimsy 'dumb-bells' that are incapable of ever landing anywhere. And we've seen the atomic piles dotted about the surface of your world. You use them for heat, power, and light. I am also aware that these piles could be made to produce fissionable material suitable for use as a mass-destruction weapon against us. I hereby warn you that if any of these piles modifies its present output in any way without the supervision of a Lednang technician, we will wipe it out of existence immediately.

"It is the widespread use of atomic energy on your planet that is

saving you from complete destruction. Normally, a Planter Fleet of the Lednang clears the chosen planet of all intelligent life before Seeding takes place. This time I am making an exception because your race can be useful to me." Deliberately his voice hardened as he said: "I am extremely long-lived by your standards. But I am impatient—it has been several of your lifetimes since I last saw a solar system. I want the complete co-operation of your race. I want it *quickly*."

The Commander studied the Human closely. Its face colour had darkened again and it was less tense; its initial shock at meeting him had begun to wear off. That was good; it should be capable of thinking clearly. Very slowly, so that the Translator would get his meaning across with no possibility of distortion, he said:

"I want you to act as intermediary—spokesman—between the Lednang and your race. There is a communicator on the wall behind you which will reach them on any frequency." The Commander paused, choosing his words with great care—he couldn't risk being too harsh in his demands, or overgentle, either—he stated: "I require a large amount of radioactive material—a few thousands of your 'tons'—and similar amounts of certain chemicals and food-plants. Shelters will also have to be built in large numbers. Everyone on the planet will have to contribute to the work, which will be supervised by a small number of Lednang.

"Providing this work is done in a satisfactory manner, and the Lednang supervisors are not molested in any way, I will not depopulate the planet, but instead will allow a certain number—say about four hundred beings—to live out their lives in some sealed-off area to be chosen later."

The Human choked and coughed, its face growing very red. Apparently its breathing passages had been blocked by its digestive juices. The Commander felt an almost overpowering disgust at such animal-like behaviour in a thinking being. Finally the words came.

"That is very, very generous of you," it said.

The Commander felt pleased, but he had a vague feeling of uneasiness, too. The Translator, he reminded himself forcefully, was fool-proof. The Human had merely expressed a natural gratitude at the generosity of his terms. He forced the doubts from his mind and said:

"Call up your home planet now. In a loosely-organised administration such as yours I expect there will be some delay in reaching a decision. However, tell them that on the speed with which they reach agreement will depend the number of Humans who will be allowed to live. That should hurry them up.

"In the unlikely event of them refusing my terms, tell them that

we have selective germ weapons capable of wiping them out completely in one rotation period. We would then do the work ourselves."

The Commander wished heartily that it was all over. It seemed eternities since he'd been free from this poisonous fog of worry, this grinding pressure of responsibility for the safety of his Expedition. But the end was in sight. He had contacted a member of this planet's dominant life-form, and received a most satisfactory response. Almost cheerfully he ended: "Be sure to stress the generous nature of my terms. We do not wish to do the work ourselves. It would be . . . inconvenient."

It would be inconvenient!

That, thought the Commander as the Human turned to the communicator, was without doubt the greatest piece of understatement in all Lednangian history. The truth was that it would be disastrous, impossible. He had come with a proud fleet of two thousand fighting units, with arms capable of reducing twenty planets the size of this one, apparently invincible. But, he thought bitterly, if the Human only knew the physical and mental condition of the crews of those ships . . .

He, the whole Expedition, had been so outrageously, so unbelievably unlucky. He writhed, physically as well as mentally, as the incidents came crowding into his mind. And it had started off so beautifully, too.

Dur Shan was a proud and gifted Branch of the Tree Crellegnan, a commoner, but brilliant and ambitious, the first of the lower Branches to be given charge of a Colonisation project. He remembered the send-off, and the crowds of well-wishers. Some of them had been Nobles so old that their birth dates had been forgotten, even by themselves. The memory of himself standing at the entry port of his Flagship giving the salute of the Planter—three raised, extended tentacles symbolising the Mother Tree of Lednang—came back to him vividly. It had been a great, proud moment. Then he had taken off.

Velocity had been quickly built up until the limiting speed of light was approached, then all engines had been cut—the increase in mass of a ship travelling at just under the speed of light made any attempt at moving faster a sheer waste of fuel. In every unit of his Fleet the crews had begun de-energising their ships until, except for the Star Approach timers, the ships were dead. Then, in the cold and the darkness they curled up tightly, exuded their protective shells, and went into the deep sleep.

And, in order not to waste time, they had already begun the body processes that would result eventually in Budding.

A solar system had been picked out for them containing at least one planet with suitable gravity and atmosphere. But spectro-analysis,

especially at inter-stellar distances, is sometimes inaccurate. When they'd arrived, the atmosphere of the chosen world turned out to be a not particularly slow poison as far as the Lednang were concerned. The other planets had been airless.

The Commander barely heard the Human talking into the communicator as he remembered the shock and near despair that had caused him. But there'd been only one thing to do, and that was try again.

When they'd left that system far behind and were free from its gravitic disturbances, the Eye had been formed. A thin, highly-reflective membrane was stretched between a circle of scoutships. By spinning the circle and accelerating forward slightly at the same time they made it a perfect concave mirror of tremendous diameter. At the mirror's centre of focus, another ship contained the eye-piece.

With this giant telescope they searched for another system with suitable planets.

But the time for the search was strictly limited. Even in inter-stellar space there was a lot of meteoric dust, and even the best pilots couldn't hold their ships to such a tight formation for long. Fogging and distortion caused by dust punctures and the wavering of the peripheral scoutships soon ruined the mirror's resolving power—but not before it had served its purpose.

The second planet had everything. Atmosphere, gravity, and temperature were all perfect. The first shelters had been built and transshipping was already under way when the Astronomers discovered that it wasn't such a wonderful place after all. During the time of the voyage there, they'd said, the system's Sun had become unstable. They'd advised immediate evacuation.

The Fleet had left just in time to avoid being vaporised along with that perfect planet.

The situation had been critical then. Food and fuel was short, and to make matters worse, the Budding of the crew members was having its usual effect of cutting down their efficiency; and psychologically they were a mess. But he had formed the Eye again and searched until he found another likely prospect. Velocity had been built up, they'd gone into deep sleep, and eventually, with his fuel practically exhausted, he had arrived.

This time the sun was stable and the planet, though a little on the small side, was right for them. But it took only one close look at it to tell him that it was impossible.

The Lednang were already there.

It was inconceivable—space being so *big*—but a previous Expedition

had already seeded the place. And they'd done it thoroughly; there was no space left for him at all, even if he had not been bound by an unbreakable code of ethics not to interfere, or even make contact, with a young and immature Colony. He had quickly taken his fleet to one of the system's outer planets, away from the maddening sight of a world he could not touch . . .

The voice of the Human, suddenly raised in anger, jolted him back to the present.

" . . . I don't *want* the assistant under-secretary, I tell you," it was shouting. "I want the Boss. These things are in a hurry, and they're *tough*. There's got to be a top level meeting right away." The creature's voice dropped to a low, desperately urgent whisper, and the Commander saw that parts of its head were beaded with moisture. "This is a life and death matter, for *everybody*."

Almost the Commander felt sympathy for the creature. He thought he knew how it was suffering—he'd known what it was like to have disaster looming on all sides, and apparently no way of escaping it. When that third solar system had proved untouchable because it was already Seeded, things had been bad.

He hadn't, he remembered, been able to do anything for quite a while. Three almost mind-shattering shocks of disappointment in a row had made him resigned, fatalistic—a very rare condition of mind for a Lednang. The condition had verged on the psychotic. Delusions of persecution, though they hadn't seemed like delusions then, had made him almost give up. But somehow he hadn't, though he didn't feel particularly proud of the fact. He'd just decided that it would be better to die doing something than while doing nothing.

More than three-quarters of the Fleet personnel he had ordered into deep sleep; this in itself was dangerous because each crew member bore two Buds in an advanced stage of growth, and this was a severe drain on their life force. But in deep sleep a person didn't eat, and the food situation had been chronic.

There was barely enough fuel left for an interplanetary flight, let alone an interstellar one, so the remaining personnel he set to work processing fuel from the radio-active deposits on one of the system's outer planets. Also, the Lednang metabolism could absorb practically anything in the Carbon chains as food; they were able to replenish the food stores with stuff that would keep them living, though they certainly wouldn't thrive on it.

All the work had to be done in spacesuits, of course. The suits were tight-fitting and inflexible for the most part—definitely not the sort

of thing to be worn by a Lednang bearing a pair of well-developed Buds. The Commander remembered with a shudder how many had died while working in those cramping suits; died horribly, under the physical and mental agony of having their still-fragile Buds crushed by a too sudden, unthinking movement.

And the sight of a Lednang dying by anything but direct violence—they were practically an immortal race—was enough to drive several others into madness.

Hundreds had died before he had the fuel and food for a fourth attempt, and the remaining crew members were in poor condition. When he'd left the system behind he set up an Eye and began to search. It was a small Eye this time—stretched between eight ships that were connected by cable—because the pilots lacked the eye and muscle co-ordination to hold a larger formation. Even then the mirror developed so many bumps and twists that it gave a true image for only about one second in twelve. Too little food of the wrong kind was showing in the way his skeleton crews were handling their ships. But apparently his luck was changing at last. He found Sol, and Earth.

The procedure was as before, and when the Fleet was decelerating into the Solar System he saw through the Flagship's telescope that his luck was even better than he could have believed possible.

The planet had a very low gravity, but otherwise it was eminently suitable; and it was inhabited. This didn't matter as he intended eliminating any intelligent life he found—that was prescribed usage with all Planter Fleets, and he could do it very easily. But then he began to think of the pitifully few really active crew members he had left, and how even they would be hampered by their Buds while shelters were being built and Lednangian food plants cultivated, and he realised how long it would take, and how terribly few Seeds—and parents—would survive. He thought of all that, then he thought again.

The result of his second thoughts led to an occurrence unheard of in all the proud history of Lednang. He decided to make a treaty!

A sudden change in the manner of the Human at the communicator caught his attention. He listened.

" . . . Yes, sir," the Human was saying respectfully, "I said eight limbs, but not like an octopus. I can't describe it. There isn't any form of life on Earth resembling it at all, not even among the insects. And its strong. I'd say its home planet had a gravity pull of at least six G's, and there must be hundreds of the things on each ship . . ."

As it continued speaking the Commander felt a growing self-satisfaction. His plan was working perfectly. The Human was forming

conclusions—and they were exactly the conclusions the Commander wanted him to form. It was right about there being hundreds on each ship, but totally wrong in thinking that they were all in the splendid physical condition of the Commander. Only himself and a few of his immediate subordinates were reasonably active—Budding was forbidden to the higher executives on an Expedition because of its effect on their mental processes—and these had been the only ones allowed to contact the Human. Its assumption was therefore justified. But when he thought of the utter sham his mighty and apparently invincible Fleet was . . .

From long distance observation he knew that the planet had only begun to use space flight, and space weapons were therefore unknown. But, just to be on the safe side, he'd kept the main fleet orbiting the Earth at a couple of diameters out while he sent two subfleets down to test the planet's defenses. But there'd been no solid projectiles, no guided missiles, nothing. The subfleets had whiffed some of those towering, unbelievably fragile cities out of existence as a demonstration of the futility of resistance, then he had recalled them, not because he was bothered by the destruction of the Human cities, but because if they had hung around much longer, the physical condition of some of the pilots would have led to miscalculations of height and distance.

If a Lednang cruiser had cracked up while making an attack approach; if it had shown itself to be vulnerable in any way, that would have spoiled the impression of complete and utter invincibility that he wanted to give the planet's inhabitants.

The planet had been a paradox, a beautiful paradox. It had atomic power—those squat, cube-shaped buildings were unmistakably nuclear reactors—and hence to technology would be of assistance to his food and fuel-starved Fleet. But somehow it had attained atomic power without having to show the corresponding scars of atomic warfare; and from what he could see, the natives were so decadent as to be incapable of harbouring a warlike thought in their minds.

He had taken his Fleet to the Moon and set it down in full view of the telescopes of Earth. His ships were defenceless while grounded, but defence was unnecessary here. A show of force was all that was required. Then he had obtained his specimens . . .

He brought his attention back to the present as the sound of a new voice came from the communicator.

" . . . And you must make it understand that we are not yet a world state, and that calling a conference will take some time," it was saying, "But we are speeding things up as much as possible." The voice became questioning. "Now, I don't want to disbelieve you, but are you certain

of your facts. We don't want to do something we'll be very sorry for later. Tell me, what weapons have they got?

"A form of H-bomb," the Human answered. "And a fast-acting bacteriological weapon that I know of. There are probably others."

"I see."

"I didn't want to talk about the terms they are offering until I contacted someone high up, in case of panic, you understand." The Human paused, then went on hastily, "but you'd better know the worst, now. Briefly, this is what they want from us, and what they offer in return . . ." It repeated the conditions of the treaty exactly as the Commander had given them, including the request for reaching a quick decision. Then it waited.

"That is a treaty? Well, well."

"Yes—and a generous one, by its standards," the Human replied. "But, tell me, what are you going to do? Can we do anything . . . constructive?"

"I don't know. It depends on how much they know about us. Tell me, do they know about our atomic—"

"Yes!" the Human interrupted harshly. "I've already told you that they know. Part of the treaty is that we produce radio-actives for them." It lowered the volume of its voice slightly and went on: "We can't change the operation of our power piles in any way. We can't make weapons. They have the whole Earth's surface either photographed or under observation. I repeat; the whole Earth's surface."

"I understand," came the unhurried reply. "But tell me, Mr. Murchison, are we being overheard?"

The Commander saw the Human exhale loudly, then answer: "That's right. The alien Commander is a few yards away from me." The Human threw a hasty glance over its shoulder. "It understands all we say though it doesn't speak our language, but it definitely isn't telepathic."

"I see. Well, in that case I'll address it directly." There was a brief pause, then speaking slowly and distinctly, the voice went on: "You must understand, sir, that we have no rulers, no supreme authority, merely—er—representatives of various groups of people. It will take several hours to gather these representatives together, and possibly as much as three or four rotation periods, before a decision can be reached . . ."

Too long, the Commander thought; far too long. Maybe he had been too lenient in his terms. He'd be more strict with these creatures—make them jump to it. A vague worry began to nag at the back of his mind. This Human talking over the communicator wasn't reacting properly. It should be fearful, in a state of panic, but instead it was

calm, unhurried. He listened to it without interrupting.

" . . . I suggest, sir," it said, " that some of our technical experts confer with you over this instrument. That way, while we are reaching a decision, you can be making your requirements known to us, and thus save time."

" I have one of our nuclear scientists with me now. If you wish to speak with him . . . ? "

Maybe these creatures weren't so slow after all, the Commander thought. He said: " I will speak with your technician. But remember, I am impatient. You must reach a decision in one half of a rotation period, not three or four, otherwise I will destroy eight of your cities for every additional hour it takes you beyond that time."

And *that*, the Commander thought grimly, should make them *move*.

" We will do our best, sir," came the reply. " But you must realise that, though we live outside them, all our production and research centres are situated in the larger cities. Destroying them might interfere with the efficiency of our later work for you."

The Commander felt frustrated, and suddenly angry. But the creature was right. He dismissed it harshly and began talking to the Human technician about his requirements.

The technician was a respectful and very attentive listener, and its knowledge of nuclear physics came as a pleasant shock to him. The Commander was profoundly grateful that the Humans were not a war-like race. The Translator, however, was apparently incapable of getting some of the more abstruse scientific concepts across properly—or the Human was slow to grasp some of the ideas. He had to go into a detailed explanation of the workings of the Lednang atomic drive—and the fundamental principles involved—before he could make the Human understand exactly what he wanted. But finally he made himself clear to the creature, and it began giving orders to some underlings that were with it. The particular isotopes that he needed could be made. But it would require considerable reorganisation of production methods, and . . . a lot of time.

The Commander told him sharply that if the whole population worked on it, very little time would be needed, and the Human had better see to it that exactly that was done. Then he told the creature to summon food-chemistry and architectural technicians as he wanted the work of provisioning and sheltering his crews to be started as quickly as possible.

While waiting for the new technicians to arrive, the Commander began using his inter-ship communicator, demanding reports on the state

of his crews from the ship captains. As he listened he thought that it was a very good thing that the Human in the room with him was not hearing those reports through the Translator. They were very, very bad.

He cut a ship-captain, who was reporting the death of a dormitory full of Lednang due to failure of the refrigeration system, off in mid-sentence. The Human, Murchison, was speaking again. He was growing suspicious of these Humans. They were properly servile before his display of power, but they didn't appear as fearful as he had expected them to be. They didn't, in fact, appear frightened at all.

Until he understood them fully it was more important that he listen and learn as much as he could.

"... And did you learn anything useful back there?"

"We certainly did," the nuclear technician that the Commander had spoken to replied. "The eighty per cent. efficient, controlled conversion of matter into energy! Think of the space drive that would give us. And it's such a simple affair, too. But it comes a bit late to do us any good."

"I guess so," the Human, Murchison, said. Then: "Er, tell me. Were you stalling back there? You didn't seem very bright."

"What do you think."

The Commander felt suddenly confused. Bright? Luminescent—over a non-visual communicator? And what exactly was "stalling"? There was ambiguity in the words that was confusing both the Translator and himself. He wouldn't have that.

"Silence!" he roared. Then: "You are using words the meaning of which is not clear. You will cease doing this immediately, or I will inflict physical punishment on the Human Murchison, here." He said to that suddenly white-faced Human: "Find out if your conference of 'representatives' has reached a decision yet."

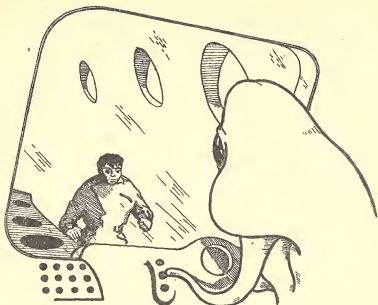
The Human began talking rapidly into the communicator, but the Commander noticed that the words it used were simple, and their meanings clear.

Eventually a voice that he had heard before said: "We are sorry, sir, but no decision has been reached as yet."

No decision yet! What did these creatures think they were doing? Didn't they know he could blast their whole planet out of existence in a matter of minutes if he wanted to. But he knew he wouldn't do that—not while his Fleet was in its present predicament.

But they would have to *hurry*.

He said quietly: "Tell your 'representatives' that they have two hours in which to reach a decision, otherwise I will begin bombing your



Arthur Cord

communities, at random."

"No, please," the Human said. "We will be as quick as possible." There was short pause, then it went on: "You must understand, sir, that there are those among us who are not realistic. Rather than have our race exist merely as a handful of animals in an alien zoo, they say we should fight. They would prefer, as they put it, death before dishonour——"

"Enough!"

The Commander felt shocked, outraged. What, he thought with a burning sense of shame, did these . . . these animals know about honour? Controlling the volume of his voice with difficulty, he said:

"Do not use that word to me again. Honour is for the higher species alone. However, I do not believe that your race can be so utterly decadent, so completely lacking in the will to survive, that they will choose wholesale suicide. You must realise that while there is life—several hundred lives in fact—there is always hope, and, conditional upon a rapid agreement to assist me, of course, I will make a further generous concession."

I will be *pleading* with them next, the Commander thought bitterly. He now freely admitted to himself that the Humans had him worried, because simply, they *weren't* worried; at least, not enough. Could they, he asked himself, have some secret, irresistible weapon? But no, they would have used it at his first hostile action.

The Commander pushed the growing anxiety into the back of his mind and went on:

"I solemnly promise that, as well as the number which I said would be allowed to live, these Humans will also be allowed to breed, and a similar number of their off-spring will be allowed to live to perpetuity."

This far I am prepared to go, the Commander thought savagely, and no farther.

The voice from the communicator said: "Er, yes. I will inform them of your . . . er . . . concession at once."

During the silence which followed, the Commander ignored the Human in the room with him, and instead listened to the reports coming in from the ships of his Fleet. Crew members going insane; crew members killing themselves; crew members forced into the utter shame of having to shed limbs that had become dead and brittle through malnutrition—the shame of being completely immobile, *dependent*. The Commander felt sick. And another dormitory of deep-sleeping Lednang had perished; the unshielded rays of the Sun and the baking heat of this moon's pumice-covered surface, taken together, was overloading the under-powered refrigeration units.

Fuel was terribly scarce, but he'd have to use some anyway. He would take his Fleet up to a circum-Lunar orbit, away from that burning grey dust. It was the only answer. He was about to give the order when the communicator came to life again.

"Mr. Murchison," it said briskly. "You may have heard of me; you may not. My job, normally, is superfluous. I tell you this so that you'll understand who I am and the necessity of giving accurate, factual information . . ."

What, thought the Commander aghast, was this?

" . . . What exactly," the voice continued, "do you know about their weapons, especially the time-lag between their decision to use them—in the unlikely event of our conference voting against surrender, of course—and their arrival here?" The voice became less brisk and its timbre changed markedly. "You know how we feel about this, Mr. Murchison. the aversion we have towards all forms of violence, and towards killing. Can you believe me that even I feel the same way—strongly. But, in

order to decide, the conference must *know*. Is there a chance of less harsh conditions——”

“*No!*” the Commander interrupted harshly. “*There is not!* The conditions will not be deviated from. No further concessions will be made.” He stopped, thinking about that voice. The tone, the method of expression, the air of authority, all sounded somehow familiar. It sounded—almost—like a Lednang. It sounded, he realised with a sudden shock of surprise, *Military!* With anger and anxiety battling for control of his voice he went on: “I see now that your race does have a military organisation after all, even though I’ve been unable to detect a single, armed surface vessel. I believe, however, that this organisation is impoverished by lack of arms and support, and completely atrophied by neglect; its echelons of command have become, I suspect, hereditary.” He paused again, then deliberately raising the volume of his voice and speaking slowly and distinctly, he said: “You have taken a grave risk by using this impotent organisation as a threat to obtain further concessions.

“I will give you the information that you seek from Murchison.

“Should your ‘representatives’ be so suicidally stupid as to decide to fight, they will have approximately three of your hours to live after this decision is made known to me—two and a half hours for my drive units to become energised, and half an hour to arrive there at full acceleration. Tell your conference of this. Also tell them that I have decided to lift my ships into an orbit around your satellite and, if they have by that time decided to co-operate, this movement of my forces will not be meant as a threat towards them. If they have not decided, then . . . Listen!” He flipped on the General Call switch without turning off the Translator so that the Humans on Earth could hear him.

“To cruisers 1834 and 1298; prepare and load germ weapon projectors! To all units; commence preparations for take-off immediately!”

For a short time there was silence. Then:

“General,” said Murchison in a suddenly frightened voice. “Two and a half hours, then they’ll scat——”

“*Quiet!*” barked the General.

“General,” came the voice of another Human on Earth. “Let me speak to it for a moment. We’ve got to do the right thing here. Maybe in two hours we could suggest something else, something less bloody.”

“If I am out-voted,” the military Human said slowly, “Well and good.”

Definitely a very decadent race, the Commander told himself; those

had not been the words of a true fighting creature. But he still felt uneasy . . .

The Human was talking again.

"Sir. You must realise that we are an advanced race. While we have grown to abhor any form of violence, we still like a certain amount of freedom. This means that we would produce much more efficiently for you if we did so willingly, in co-operation, instead of being forced. An individual cannot be driven to using his brain . . ."

The first solar system had been a bitter disappointment. The second and third failures should have demolished his mind. But they hadn't. Somehow he'd hung on. He'd hung on while his mighty Fleet—with its starving and rotting crew—flew the interstellar night, outwardly an irresistible, shining spearhead of Empire. He had persisted stubbornly while all reason demanded that he cease. Cease making concessions to the health of his crew; cease the growing relaxation of discipline that the over-working of skeleton crews made necessary; cease, in fact, to live—while he still had a few shreds of pride, authority, and honour left to him. Honour was very important to a Lednang. But he had continued to make concessions and compromise, until . . .

This, he thought with a cold, furious anger that he had never known before, *was too much*.

The Human was saying: ". . . We have therefore a counter-proposal to make. Instead of settling on Earth, we offer you—unconditionally—our planets Mars and Venus. With your giant ships you could ferry our men and material to these planets. The shelters you require could be built very quickly—we are expert at the high-speed construction of prefabricated parts—and we could generate the air necessary if the native atmosphere was unsuited to you. This would be an ideal arrangement for both of us, because we could produce the material you need much more quickly and efficiently if we were not subjected to the physical and psychological shock of constant contact with a completely alien life-form. There would almost certainly be friction between us otherwise.

"If you agree to this," the Human urged, "and settle on our sister worlds, eventually the ill-feeling brought about by the casualties inflicted on us during your attack would fade. We would then be able to exchange scientific cultural knowledge; both our races would be bound to benefit enormously. Instead of master and unwilling slave, we could go forward together as friends, brothers."

There was a point, the Commander found, where blazing, all-consuming anger stopped and was replaced by an icy, merciless calm. He passed that point with the Human's last few words. Never could a

Lednang have been so terribly, so unbelievably insulted.

The Lednang, *brothers*, with these snivelling, crawling slugs . . .

"We want only peace," the Human ended, "At almost any price. Violence, killing, is against our——"

"*I will not speak with you further,*" the Commander thundered in a terrible voice. "*You have three hours to live.*"

He had come so far, so very far. Four star systems he had tried, and nothing but disaster and black despair had met him at each one. But even now he felt strangely loath to take the honorable—and easy—way out.

He felt a little like that ancient, legendary Tree of Lednang, when it was still immobile, still Rooted. At that time it had been beset by the atmosphere elements of wind and electrical discharge, starved of moisture, and riddled with vermin until it had been almost completely rotten. But it had survived.

It had survived, so the legends told, because it had sloughed off the rotten Branches and fought on with the small though perfect residue.

The moral was plain; it could be applied here. He had been too yielding, too merciful, for far too long. All members of his crews who were in a reasonably fit condition he would collect into one or two ships, and they would go down and Seed that planet without help. It would take a long time to accomplish—and there would be many casualties—but it could be done. He knew he couldn't fail, simply because all that could happen to him had already happened; there couldn't be any more misfortune left. The rest of the Expedition—the starving, deep-sleeping and diseased Branches of his Plant—he would order away, on a course set automatically to intersect the Sun.

But first he must clear Earth of its Humans.

Ignoring the creature Murchison, who was sitting propped against a bulkhead watching him, he said into his communicator:

"Cruisers 1834 and 1298; report!"

"Germ weapons armed and loaded as ordered, sir," the reply came promptly. "We are ready to take off——"

At that moment the Earth missiles arrived. They rained down on the grounded Lednang fleet thickly and continuously for almost three seconds. A few had fission warheads, but most used the frightfully destructive energy of the hydrogen-helium fusion reaction. The lunar plain bubbled and boiled in the heat of the hundreds of tiny suns that blazed suddenly into life on its surface, and for hundreds of miles around the resultant ground shock-wave hammered ringwalls and mountain peaks into flat mounds of dust. Nothing was left of the Lednang fleet but a

few shattered hulks embedded in the fast-cooling slag that had once been a pumice-covered plain.

By some freak of chance his control room was undamaged, but on the Human's side of the transparent wall the air was leaking badly. The creature's voice, coming through the speaker diaphragm of the helmet it had donned, grew weaker as the atmosphere which carried it grew less.

"We are not a peaceful race, Commander. We were, until recently, the very opposite." Self disgust tinged its voice. "We fought bitterly, incessantly, amongst ourselves for centuries—and over the most paltry and stupid things. With each new war our weapons improved. The wars became more widespread, more cold-blooded, more murderously-destructive. They became so frightful that we began to grow heartily sick of war.

"But old habits die hard.

"We stopped fighting, but we couldn't trust each other at first—we kept on arming. One side had atomic bombs, then everyone had atomic bombs. One side succeeded in putting a spacestation up, to act as an observation and missile launching platform. Soon the other side had missiles capable of attaining orbital velocity, too. Non-nuclear weapons and weapon-carriers were by then obsolete. The first side took its idea a step further and set up a base on the Moon. The other side answered this by developing missiles capable of reaching the Moon. And so it went on.

"None of these weapons were ever used, of course. They were stored away in safe places, but in such a way that they could be used at very short notice."

The Human paused, bracing himself more comfortably against the crazy angle of the floor. The Commander listened dully as he continued.

"Big cities were obvious targets for atomic attack, so decentralisation was forced upon us. The cities became practically deserted. We kept spending fantastic sums just to feel secure, but naturally we never felt safe at all. Then one day we all realised how stupid it all was, and how unnecessary——"

"But where were they hidden?" the Commander burst out, a burning curiosity momentarily lifting him out of his apathy. "I couldn't see any weapons."

"I know," replied the Human. "That surprised us. If not actually visible, we thought they would be detectable, especially when you put all those floating camera pick-ups above our power piles. But when we found out what you are like, and the gravity you must be accustomed to

at home, we realised that you would never think of looking for them where they were hidden.

"On your home planet with its high gravity, I'd say that you don't go in for tall buildings; you must have a fear of falling—or of having something fall on you—amounting to a psychosis. You could never believe that anyone would build deeply . . . *underground*."

That decided him. To be beaten was bad; but to be beaten by a creature that burrowed and lived in the ground, by an *insect* . . . The capsule was reputed to be painless.

"We did so want to be friends with you," the Human was saying as the final paralysis crept along the Commander's limbs. "But when you decided to take your fleet into space again—making it an almost impossible target for our missiles—we couldn't risk it. We had to hit you before you could scatter . . ."

The Commander ceased to care about or hear the Human long before it had finished talking. The Death with Honour is quick.

JAMES WHITE

Back Numbers . . .

Many hours of reading enjoyment supplied by your favourite science-fiction authors are still available to you through back issues of NEBULA.

Numbers Six to Twelve, inclusive, are available at 1/6d. each, while a very limited number of earlier issues have been made available for the benefit of collectors at 2/3d. each. All prices post free.

Cash with order, please, to

NEBULA SCIENCE FICTION

159, Crownpoint Rd., Glasgow S.E.

The Beautiful Martian

*She landed, bearing gifts of joy, happiness and wonder.
She could not know that earth would not be interested*

Illustrated by Martin Frew

It was Christmas Eve. Hoar frost mantled the forest and hung like drops of crystal dew about silver fir needles. In the valley, the timber roofs of the village were white and the peal of a church bell was echoed by chirping robins. It was a time of peace and goodwill to all men, proclaimed the carollers.

High in the sky a blaze of light shone out, trailing sparks towards the earth.

"A meteor!" cried some of the villagers.

"A sign," declared others.

Lower came the splendid thing, flushed rose-pink, swooping like a bird and shooting sprays of stars. Down and down, tossed bubble-like on rising air currents, hovering, falling, a bright gem on storm-tossed foam.

"Lovely," sighed a small child, clapping hands.

It came to earth on the green triangle at the north end of the village and all the people hurried to greet the voyagers from space. The mayor donned his robes and hung the chain of office about his throat. The children picked flowers to make a bouquet. The women put on their Sunday hats.

"They'll be hungry," murmured the baker's wife, and put fresh dough in the oven to bake, singing all the while.

A subtle excitement linked those on the green. They stood in groups, loosely ringing the silver sphere, a sense of wonder pervading them. Conversation was conducted in hushed tones, and even the children were quiet. They waited for the miracle to happen.

A soft, tinkling music began. It came from the sphere and moved gently through the village to the frosted firs. There was no other sound, for the bell-ringer too had joined the circle. The music had no melody, no rhythm, yet it was beautiful. The policeman's dog lay with his muzzle between his paws, tail wagging in appreciation.

Then, with soundless efficiency, the wonderful sphere divided in two parts, imitating an egg.

"It's hatching out," said a chicken farmer with conviction.

A lambent flame danced out, soared into the air and playfully commenced a ballet above the heads of the villagers. A long sigh surged through all who watched the fire-thing. The mayor forgot his speech of welcome and children clapped delightedly.

Gliding, spinning, soaring, leaping from rooftop to rooftop, darting from weathercock to chimney-cowl, from wall to barn, skimming the pond where ducks floated in solemn procession, it was a sight to gladden the heart. Pure and radiant it was, a dancing, flickering flame, changing form and hue, vivacious, never still for a second but always playing some new game.

The robins joined in, flying splendid circles about the flame-being, singing as it sang. Children threw flowers into the air and called it to play with them. They began to dance in the streets, the mayor with the baker's wife and the postman with the school-teacher. They lit bonfires and let off crackers, brought out the Christmas trees decorated with candles. They sang carols and showered the two halves of the silver sphere with holly and mistletoe.

"It's beautiful," said the butcher wistfully.

"It!" exclaimed a poet angrily. "You mean she! As if a mere *it* could be so wonderful. *She* is lovely . . ."

She seemed to sense the pleasure she gave for she danced faster and sparkled more prettily than before. She played with the children and the robins and the animals of the village. All night the merry-making went on for no-one could think of sleeping. They brought out trestle-tables and covered them with white starched cloths and loaded them with food. They drank and sang and danced away the hours, for who could tell when the miracle might end?



"Mummy," said one small girl, "she won't go away, will she? The beautiful flame-lady won't leave us now?"

"Hush, darling," said her mother tenderly. "You must enjoy the moment, for to-morrow . . ." She could not finish.

And all the while, *she* danced through the air, a delicate pastel light throwing off sparks, now blue, now silver, wavering, blazing up again. She was brilliant gold, violet, crimson and turquoise, a shimmering coruscation of colours never before seen. Her dance was pure joy, ethereal ecstasy, delicious with wonder.

The excitement grew and turned into Christmas day. The news spread far and wide from that remote valley and civilization sent the unwise men to mock.

They came in cars, the scientists with their apparatus, the fanatics who proclaimed the end of the world, the sophisticated laughing brittle laughter, the bored newspaper men. The rumble of tanks and heavy guns sounded through the village streets, the pompous talk of politicians echoed and made a parrot-house of the silent firs, the business men sharpened their wits to invent a thousand money-making schemes.

There was barbed wire and pass-words and intricate experiments, brisk telephoning and a coming and going of messengers.

"Potential menace," said the military mind, "every precaution must be taken."

"Radiation of an entirely new kind," pronounced the scientists, "a life form not of this planet."

"Float a loan," whispered the financiers, "create a new market. *Thousands* in it!"

She danced for them all, making a mockery of their barbed wire, playing with the tanks and trying to make friends with wooden-faced soldiers. She spiralled and flamed and flowed, twinkled star-like and flaunted her dazzling rainbow.

"A monster from Mars," screamed the reporters. "Menace from space threatens to engulf the world in flames!"

"The angel of death is upon us," ranted the fanatics. "Save your souls while there is yet time."

"Cannot possibly exist," decided the scientists, and became blind men who would not see.

Still she cavorted, performing aerial convolutions, trilling her alien song and radiating chromatic splendour.

"Evacuate the village," ordered the general. "Women and children first."

"Don't panic," advised the politicians, running round in circles. "*There must be no panic!*"

"A circus?" wondered the impresario. "A side-show? Or only a one-night stand?"

The villagers wavered in their faith. The mayor joined the ranks of uniforms and importantly began the evacuation; lorries and food-parcels and neat little labels.

"Fools," cried the poet, leaping to a high roof and donning jester's clothes. "There is no evil in her, only beauty. Open your hearts and you will see! The children see—are you then such fools to blind yourselves with fear?"

They told the fire-brigade to bring him down, then locked him away in a mad-house.

"Women and children first," repeated the general.

But the children were crying and the dogs slunk howling away. Her dance went on, but without that vital spark, her song was sad because the children cried, and her colour grew sombre. The state of innocence had departed from the village and an ugliness welled up from the souls of its inhabitants, covering their faces with the masks of beasts.

"A devil," they whispered. "Destroy, destroy!"

They picked up sticks and stones and garden forks, swept aside the soldiers and the wire entanglements, and surrounded her with fear and hate.

"Death," they shouted. "Death and death and death again!"

She shrank before them, flickering, guttering, her swan-song putting the robins to flight. She shrank to a candle-flame, snuffed out. They trampled over her and smashed the twin halves of the wonderful ship. They left nothing to mark the spot, not even a cross.

The silence reached to the frost-covered firs and beyond to the cities which sighed with relief.

"Nothing more for us here," said the general briskly, and marched his men away.

"No money in it," decided the financiers with a shake of the head.

"Safe now," mumbled the politicians. "No need for panic."

The cars drove off, back to science and cocktails and the blare of radios. A silence settled over the village, a long cold silence filled only with the shame and guilt of all humanity.

SYDNEY J. BOUNDS

THE NEXT ISSUE ! ! !

Mysteriously stranded on a strange planet, their ship under constant observation, three Earthmen strive to interpret obscure instructions received from outside.

This is the enthralling central theme of a great new novel-ette specially written for NEBULA No. 15 by one of our most talented new authors, BOB SHAW.

Also in this issue is another outstanding novel in his "Martian" series by E. C. TUBB, backed by memorable short stories by a star-studded cast of writers including ROBERT A. HEINLEIN, JAMES WHITE and CHRISTOPHER LYSTER.

Order a copy from your newsagent today or, in case of difficulty, send a Cheque or P.O. for 12/- to "NEBULA", 159, Crownpoint Road, Glasgow, S.E., to receive the next six issues of Britain's Leading Science-Fiction Magazine post free.

Quis Custodiet . . .

*They held the lives of millions in their hands . . .
and sometimes the strain was very great*

Illustrated by John J. Greengrass

The dream was always the same.

He walked across a featureless plain beneath a featureless sky. It worried him a little, that sky, dun-coloured, cloudless, starless, without a sun or moon or any recognisable thing, but the plain worried him more. He couldn't see the surface, it was covered with a writhing, knee-high mist, slate-blue and swirling about his legs as he walked. The hidden surface wasn't hard and firm beneath his feet but soft and yielding and, for some reason, he knew that if ever he stopped moving it would suck him down and engulf him as though it were quicksand. The sky was bad, the plain was worse, but what really upset him was the blonde.

She wouldn't stop screaming.

He never could see her face, but the rest of her was quite plain. She stood some distance before him, slight against the sky, tall, supple, dressed all in white and very, very female. Her long, tallow hair fell across her features, her white, long-fingered hands clenched in the thick tresses and she seemed tense as though waiting for him to join her, to lift her head and to stare into her face. And she screamed . . . and screamed . . . and screamed . . .

He always awoke just before he reached her.

Paterson looked up from the chess board as Thorne entered the room and his eyes narrowed with unconscious speculation. "Sleep well?"

"I slept well enough." Thorne made a point of not looking at the psychologist. "Any coffee?"

"Help yourself." Gregory jerked his head towards the hot plate, his eyes not leaving the board. "Your move, Pat."

"Is it?" Paterson glanced at the board, moved a knight, then stared again at Thorne. "You don't look so good. Sure you slept well?"

"For Pete's sake!" The coffee pot made a metallic clang as Thorne slammed it down. "What is this? I told you . . ."

"Take it easy, Thorne." Gregory didn't raise his voice but his expression as he stared at his co-worker was unmistakable. Thorne swallowed.

"Sorry, but you'd think once was enough. Sure I slept well. Satisfied?"

"Maybe." Paterson knew his job too well to display any anger he may have felt. He looked up as the fourth man on the Station entered the living quarters. Waters was the oldest one of them all. Older than Paterson by five years and older than either of the crewmen by fifteen. He sighed as he sat down, his grey hair and wistful blue eyes making him look like the popular conception of an absent-minded professor. He only looked like that.

"Coffee?" He smiled as Thorne handed him a cup. "Thank you." He stared at the chess board. "Who's move?"

"Mine." Gregory squinted at the pieces. "What do you advise, Doc?"

"Resign."

"What?"

"Give Pat the game, you'll be beaten in three moves." Gently Waters pointed them out with one thin finger. "See? You lose a rook and then must move the queen to cover. Queen goes and . . ." He sipped at the coffee.

"Damn!" Gregory glowered his irritation. "Why can't I ever manage to win a game with Paterson? He beats me every time."

"One answer could be that I'm a better man," suggested the psychologist. He stared at Waters. "Sleep well?"

"Now he's starting on his side-kick," grunted Thorne disgustedly. "You'd think that at least one head-shrinker would leave the other head-shrinker alone."

This time Gregory didn't reprimand him. He stared at Paterson as if trying to figure out the nastiest form of death to which the human body could be subject. "When you said that you were the better man," he said thickly. "Did you mean that personally?"

"He meant that he was a better chess player," said Waters softly. "After all, he's had longer to learn the game than you have."

"I was talking to the boy, not to his dog," snapped Gregory rudely. He stared at Paterson. "Well?"

"I did not mean the remark to be offensive," said the psychologist coldly. "Why are you getting so upset?"

"I'm not getting upset."

"Yes, you are. The signs are obvious, even to a layman."

"I tell you that I'm not getting upset," shouted Gregory. He swore deeply and with real feeling. "To hell with this! What are you trying to do, drive us all crazy?" He looked appealingly at Waters. "Can't you do something with him?"

"Relax, Captain." The old man began to set up the pieces. "Care for another game?"

"No."

"Poker, then?"

"No." Gregory glanced at Thorne. "I'm going to check the instruments. Coming?"

"Sure." Hastily Thorne gulped his coffee. "Anything to get away from these two. Anything at all."

Alone the two psychologists looked at each other.

The problem was one which had plagued the world ever since the invention of Authority. The Romans had summed it up very nicely in a phrase both synical and apt. *Quis Custodiet Ipsos Custodes?* Who will watch the Watchers? Or, literally, who will protect the people from their own protectors? Normally it didn't really matter. Those who had power invariably abused it and were eventually replaced by others who inevitably followed the same path. But while men could only control a limited potential of destruction it wasn't too important. Men might suffer but Man was safe. It was only when Man had finally perfected a way utterly to destroy himself and his planet that the problem became one of immediate urgency.

And there was still no solution.

Waters thought about it as he sat in his chair and watched his fellow-psychologist set up the pieces. As ever he was acutely aware of the stored destruction all around him. Aware too of the Earth, some twenty thousand miles below, sitting like a big round ball, helpless against the atomic death which could be released by the touch of a hand. Missiles which, once released, would completely and finally put a finish to the hopes and dreams, ideals and frustrations of some two thousand million men, women and children.

Idly he wondered at the mentality of a race which had set up a colossal damoclian sword over its collective head and then sweated with

fear in case it should ever be used. The obvious thing would have been to dismantle it, but when have men ever done the obvious? The Station was the Great Peacemaker, the Untouchable Avenger ready to deal death and destruction to the enemies of its builders. So they had believed and so they continued to believe, but, once built and established, they had run smack into the hard wall of reality.

Who was going to Guard the Guardians?

One man, crazed perhaps, sick maybe with the strain of waiting for the order which never came, could ruin the world. Or he could imagine himself a God or a Devil. He could attempt to hold the world to ransom, or form a clique, or do any of a thousand things that his fancy dictated. He could do anything once in charge of the Station—and there was nothing anyone could do to stop him.

And yet the Station had to be kept ready for immediate use or its purpose was wasted.

"Gregory's cracking," said Paterson as he stared at the board. "Did you notice how he reacted?"

"A normal reaction." Waters fought against his instinctive dislike of his fellow psychologist knowing it to be due solely to environment. "He seemed all right to me."

"Thorne too. He isn't sleeping well and yet insists that he is."

"And you?"

"Me?" Paterson looked surprised. "I'm all right."

"Are you?" Waters shrugged. "You've been up here six months now. That's a long time for Station duty. I've only been here three and I can sense the strain." He moved a pawn. "Thorne came up after Gregory, didn't he?"

"Yes. Gregory's been here five months, Thorne almost four."

"Average time for crewmen is not over six and for psychologists a little longer." Waters stared thoughtfully at the board. "Trouble is a man you know is better than one you don't. Ground tests weed out the obviously unsuitable, but no one can predict what may happen to any one man once in full control of the Station. I say we keep Gregory as long as possible before asking for a replacement."

"I know my job, Waters," said Paterson stiffly. He slammed a knight down with unnecessary force. "Your move."

"Maybe it should be yours—down to Earth I mean." Waters stared at the younger man. "I've been watching you, Paterson, just as you've been watching me and both of us the others. You're too easily annoyed, too impatient, too much inclined to make hasty judgements. As

a psychologist you should know better than to arouse unnecessary antagonism. All you're doing is to drive the two crewmen closer together, the very thing we want to avoid. Making them hate us may divert their emotions and provide an escape medium, but we must make them hate each other too. If we don't, we may wind up finding that they've decided to do the very thing we're supposed to guard against."

"I know my job," repeated Paterson coldly. "You know as well as I do that the whole purpose in only having two crewmen is to reduce the possibility of collusion to a minimum. Even if they did so decide we can prevent them, our numbers are equal."

"They're younger than we are," reminded Waters, "and never forget that one of us may decide to join them."

"Ridiculous!" Paterson seemed genuinely annoyed. "The basic types are hopelessly incompatible to begin with. We don't have to worry about anything but mental aberration of an individual." He rapped on the board. "Your move."

"When you come to think of it," mused Waters, as he moved a rook, "the entire concept is ludicrous. Two men who do nothing but stand by day after day in case they are ordered to fire the missiles. Two other men who do nothing but watch the crewmen to make sure they act normally." He shrugged. "'Normally'! How can men ever be normal when they are watched so closely?"

"Can you suggest a better way?" Paterson moved a piece with an irritated gesture.

"No," admitted the older man. "Not a better way to both staff and control the Station, but wouldn't it be better not to have the Station at all?"

Paterson didn't answer.

Outside of the living quarters the Station was a mass of storage bins, launching tubes, electronic computers, observation instruments, radionic eyes and all the other essential appurtenances of its function. Gravity was provided in the living quarters by the spin of the Station but outside, towards the gleaming metal of the launching tubes, gravity was absent. Gregory, sweating inside his suit, grunted as he launched himself towards the instruments. Thorne, a shapeless bulk beside him, waited as the Captain unloaded the recorders and reset the spools. They didn't speak until the job was finished.

"How long you sticking it, Gregory?" Thorne's voice sounded thoughtful as it came over the suit radio. While he would never admit it, he deliberately delayed re-entrance to the living quarters in order to

avoid meeting the searching stare of the psychologists. Gregory shrugged then, realising that the gesture would be unobserved, grunted.

"Don't know or won't tell?" Thorne laughed without humour. "I don't blame you. With those head-doctors questioning every word and action you can never tell when they'll be sending for replacements."

"Don't worry about it, and don't fly off the handle so much. That's the quick way to get sent back."

"You should talk."

"I know, but there's something about Paterson gets under my skin. Waters isn't so bad, at least he doesn't seem to deliberately needle anyone, but that Paterson!"

"Did you sleep well?" mimicked Thorne. "As if he gives a damn whether I slept well or not."

"Did you?"

"Did I what?"

"Sleep well."

"No," admitted Thorne reluctantly. "I didn't, but what's that got to do with him?"

"Why don't you ask him?" Gregory sounded curt. Thorne twisted his body to stare at the captain but could only see a blur beyond the other's faceplate.

"What's the matter, Greg? Something on your mind?"

"Not really." The other man seemed to hesitate. "I . . . Oh, to hell with it! If it wasn't for the money I'd ask to be sent back now."

"Back!" Thorne stared at the swollen ball of Earth below them. "I wonder what it's like down there now?" He gave a short laugh. "Funny, I've been away only a few months and it seems like forever. The shows, the crowds, the girls. . . ." His voice dropped a little. "The girls."

"You got one?"

"A girl? No, not what you'd call a real girl. Not one I want to marry anyway. You?"

"Yes. We're going to get married when I return." Gregory's voice softened as he thought about it. "That's what made me volunteer for Station duty. With the triple pay and the one-to-one leave afterwards we could have got married without any worries." He caught himself. "We *can* get married."

"Must be nice to get married," mused Thorne. "To settle down and raise kids." He chuckled. "Maybe you'll take them out one fine night and point up here and tell them about the time when you held the entire world in the palm of your hand."

"How do you mean?"

"Don't tell me you don't know, Greg. With the electronic stuff here a moron could trip the releases. All they want us for is because we're more reliable than a servo-mech. We can answer the radio and, if ever we get the signal, blooie. . . ." He sucked in his breath. "If it does happen we'll have a grandstand seat for the biggest show in history. Man! will that be something to talk about!"

"I don't like to talk about it," said Gregory coldly. "Don't forget, my girl's down there."

"We won't hit your girl. She's safe with all the rest of our people. That's why we're up here, so that if anyone starts anything we can finish it. And I mean finish it."

"Yes," said Gregory softly. "We could finish it, couldn't we?"

Below him the Earth looked a mottled ball of green and brown, grey and fleecy white, tenuous and, somehow, almost unreal.

The warning came two days later. It was the thing for which they waited, the one thing they had hoped never to hear. The radio whined its attention signal, crackled as the scramblers meshed then steadied to a cold, impersonal voice.

"Earth to Sky. Warning yellow. Repeat. Warning yellow. Acknowledge."

"Sky to Earth," said Gregory numbly. "Message received. Sky on warning yellow."

"Received," said the impersonal voice, and the radio clicked into silence. Thorne exhaled with a long, low whistle.

"Man! This is it!"

"No!" Gregory swallowed as he fought the sickness inside of him. "It's only warning yellow. All we have to do is to check the firing computers, load the missiles and remove the safety fuses."

"And on warning red we align the tubes and keep one finger on the buttons," Thorne nodded. "I know, but this is the first time we've ever had even warning yellow."

"Routine," said Paterson. "Just routine." He looked at Waters. "That's all it could be, isn't it?"

Waters shrugged. He seemed nervous and, as he watched the two crewmen begin their preparation, he sat down with a listlessness unusual in one so normally active.

"They want to keep us up to scratch," said Paterson, more to himself than to the others. "Drill, almost, a routine check, nothing to it really."

"Drill once in two years?" Gregory shook his head. "We don't need drill. The maintenance crews keep everything in top-order. All we're here for is to pull the trigger." He looked at Thorne. "Well, are you ready?"

"Sure." Thorne seemed burning with anticipation. "Shall I slip out the fuses and load the tubes while you check the cumputors? Or would you rather have me do the checking?"

"I'll do it."

"Right." Thorne headed towards the door. "Listen for the rumble."

Normally the launching tubes were left empty. Loading them was a matter of energising the servo-mechanisms feeding the slender missiles into the racks. It took hardly any time at all, the defusing even less, but the noise of the conveyors vibrated through the Station with an unmistakable sound. That sound was deliberate, designed to prevent any one man loading and firing the missiles without warning the rest of the personnel. It was possible that one man might break and run amok, but even if he did manage to overpower the two men normally on duty with him, he couldn't prevent the off-duty man, locked in his sleeping quarters, from being wakened by the warning rumble and throwing the safety cut-out switch.

As Thorne left the living quarters, Gregory lifted the dust covers on the instruments and threw a series of toggles. Lights glowed before him and dials kicked and then steadied as power surged through the big computers. On a screen above the panel, Earth, huge with magnification, steadied into view. Smaller screens gave higher magnification, their area of coverage marked by thin red squares on the master image. Suddenly, the casual atmosphere of the living room had been replaced by the cold, metallic efficiency of a master control room.

The rumble came just as Gregory turned from the instruments.

It was startlingly loud, thundering from the metal and vibrating in the air. It lasted for almost five minutes and, when it finally died, they all knew that the tubes were ready and waiting.

Thorne came back just as Paterson had put on the coffee.

"Well, we're all set and ready to go. Wonder where it will be?" He stared at the master image. "Hope that the weather conditions are right, we don't want to miss."

"We can't miss," said Gregory. "The areas are too large."

"Miss hitting dead-centre I mean." Thorne sniffed at the odour of boiling coffee. "Good, I'm all for something to drink, but it should have been something stronger."

"You seem to be glad at the prospects of a war," said Paterson wonderingly. "Surely you don't really want to see another conflict?"

"What I want doesn't matter, does it?" Thorne sat down with a cheerful grin. "I'm not the one to decide policy. If the Big Brass say blast, then it's blast. Anyway, anything's better than sitting up here day after day waiting to go crazy. Give me action every time, there's nothing to beat it." He rose as the coffee boiled over and poured out four cups. "Anyway, it's not really a war, is it? We just wipe out a city or two, fire a few missiles just to show them who's the boss, and the whole thing'll be over." He sipped and pursed his lips at the too-hot liquid.

"You know what it means if we fire the missiles?" Paterson stared appealingly at Waters. "You know, don't you?"

"Everyone knows. We only fire after hostilities have started. We destroy a few locations and, in return, they blast our country in return. So we smash them." Waters shrugged. "I don't quite know the tolerance-limit of radiation, but I do know that we alone could poison the atmosphere. If we fire it means the end of the human race."

"You see?" Paterson was sweating. "You can't fire the missiles."

"Can't?" Thorne grinned. "Aren't you forgetting something? That's just what we're here for." Deliberately he put down his cup. "I've been stuck in this place for four months now and, in all that time, you've watched my every move, my every every word and gesture. And for why? Just to see that I stayed capable off doing my job. Well, I can do my job and I'm willing to do it. This time we're the bosses, Gregory and me, and you head-shrinkers can take a back seat."

"You're making a slight mistake, Thorne," said Waters quietly. "We watched you only to make sure that you wouldn't fire the missiles."

"I'm not firing them. I'm only the boy around here. It's the Big Brass who will really set them off."

"Justification," said Waters tiredly. "You can't argue with him, Paterson. He feels no guilt at what he proposes doing. It's a case of glorified buck-passing. He takes orders and blames the man who issues them. The man who issues them probably salves his conscience by telling himself that he won't really be the one to fire the missiles. It's easy to kill if you don't have to pull the trigger."

"I don't get this." Thorne seemed genuinely bewildered. "All this time you've been checking up on me and Gregory here, and now that it's time to do our job you don't want us to do it. I don't understand."

"It's simple, really," said Waters. "Everyone, especially everyone who claims any intelligence at all, knows just what an atomic war will do. Anything is better than that. Anything. Fools who mouth words about

rather killing the race than accepting what they are pleased to term 'slavery' aren't intelligent. They have no right to decide the fate of others. But something, I don't know what, has given everyone a false comfort. Somehow, even though we know what atomics can do, we don't worry about it. As a psychologist I find it interesting to speculate just why that should be."

"Propaganda," snapped Paterson bitterly. "False education."

"Were you a victim of false education?" Waters stared at his fellow psychologist. "Up until now you seemed perfectly willing to maintain the staff of the Station at optimum level. Now you, as Thorne has pointed out, seem to want to undo all your work. Why?"

"I don't know." Paterson squirmed in his chair. "I don't know."

"I have a theory," mused Waters. "I believe that the human race will not be destroyed. Somehow it will save itself, in spite of itself, or because of itself. No race with such a tremendous survival potential, and ours is fantastic in that, could deliberately destroy itself."

"I can't see where your 'survival potential' comes into it," snapped Paterson dryly. "We've done a pretty good job of killing ourselves for all of recorded history."

"Nonsense!" Waters glared at the other man. "I'm surprised at you, Paterson. What is Man? He isn't prolific as rabbits are, and so doesn't survive that way. He isn't fanged or armoured and didn't survive that way. He has a brain, yes, but he had to start, and, even with a brain, he was still subject to attack from other animals as well as an assortment of diseases unknown to any other species. And yet we have survived. Men die but Man does not die. Instead we have increased and spread, built and developed and are now on the threshold of still further expansion. Why is that? The average man is no genius and even the specialists are really ignorant in the essential things. Could the builders of this Station have grown their own food, or processed it, or woven their own clothing?"

"Of course not, but that is irrelevant."

"I think not. I think that there is something unique to the race. Jung touched it when he spoke of 'racial consciousness' but I believe it is deeper than that. That is why I am not worried. I refuse to believe that such a race could deliberately destroy itself."

"You are hoping for a miracle," said Paterson bitterly. "You are two thousand years too late."

"Not a miracle," corrected Waters gently. "Merely a modicum of sanity." He turned, as they all did, towards the droning attention signal from the radio.

It was warning red. Somehow they had all expected it, but hearing the cold, impersonal tones from the speaker made it horribly real. Warning red which meant that somewhere down on Earth someone was preparing to open the final conflict. Final, that is, if the Station played its role of Avenger.

Waters stared at the instruments now lit by the glowing symbols of the designated cities. Spots of light showed on the master image, repeated on the smaller screens as the computers plotted the flight of the missiles. All that was needed was the command from Base followed by the obedient pressure of a lever and death would streak from the launching tubes towards the planet. A moron could operate the Station if he knew which button or lever did what. Any person with the ability and intelligence to drive a car. Certainly any of the four men in the control room.

And if they didn't?

Traitor is a bad word—bad that is to those who give it. To others a 'traitor' could well be a saviour because a traitor is merely a person who does not do as others decide. No man could ever really be a traitor to himself, not if he did what he believed to be right. And no man could possibly be a traitor if by so being he was instrumental in saving his race.

Waters was halfway out of his chair when he heard the sound of the blow.

"Stay where you are." Gregory stared at the two psychologists, Thorne a crumpled figure at his feet, the fingers of his left hand automatically rubbing the split knuckles of his right.

"What are you going to do?" Paterson seemed to be sitting on fish-hooks.

"Sit still." Waters put out his hand and pressed Paterson back into his seat. "He knows what he's doing."

"But the Station! I . . ."

They all felt the lurch as the stabilisers whined into life. On the big screen the image of Earth seemed to quiver as the manual controls overrode the automatics, then, slowly, it began to move aside and be replaced by the star-lit splendour of space.

"Don't interfere with me," warned Gregory. "I know what I'm doing." He stooped forward as Earth slipped aside, his hand on the firing lever. Abruptly he threw it and, through the metal of the structure, the transmitted sound of the released missiles increased into a dull throb of sound.

"They'll miss?" Waters kept his arm against Paterson.

"They'd better." Gregory kept his hand on the control. "Not much movement with the stabilisers but they should blast clear." His



voice rose above the throb of sound from the launching tubes. "Satisfied?"

"You had a breakdown," babbled Paterson. "You weren't responsible. We can both swear to that. In a way it's our fault for not asking for a replacement sooner. You won't be alone, Gregory, I promise you that."

"And Thorne?"

"I had forgotten Thorne." Paterson stared wildly about the room. "Could we . . . ?"

"No." Gregory straightened as the last of the missiles sped from the Station and harmlessly into space. "Report what I've done. Once they know the Station is an empty threat, or an empty boast, they will forget their war—I hope."

"They will forget." Waters rose as Paterson ran towards the radio. "You know what will happen to you, don't you?"

"I can guess."

"Paterson was right when he said that we should share the blame. They won't be gentle with you."

"It doesn't matter. Before they can restock the Station the other nations will have destroyed it. Once they know it no longer threatens them they will lose their antagonism." Gregory shrugged. "Better ask Base to get you off before that happens."

"Don't worry about us." Waters stared intently at the younger man. "Why?"

"What made me do it?"

"Yes."

"I don't know." Gregory looked down at Thorne as if seeing him for the first time. "I mean that, I just don't know." He tried to smile. "I must have gone a little insane. One minute I was checking the firing patterns, the next . . ." He shrugged. "Not that it matters now. It's too late for regrets."

"Yes," said Waters quietly. "It's too late for anything."

For a moment they stood looking at each other, then, without a word, Gregory turned and left the room. Waters didn't call after him. Not even his professional curiosity could justify him stopping Gregory from doing what had to be done. A quick end, a clean death, the only thing now left to him. But he would liked to have known.

Had Gregory also been plagued with dreams? The ravaged plain, the hopeless sky, the symbolical female figure? Or had it been something deeper than mere dreams? Could there be a racial instinct which took control whenever the race was in real danger of total extinction? Waters didn't know. He would never know, but one thing he was sure of.

The blonde had stopped screaming.

E. C. TUBB



Question Answered

The answer was simplicity itself—which was the very reason he could not be allowed to use it

Illustrated by Martin Frew

“What is a man?”

“A man is . . .”

The vibrant hum of life filled the vast machine. Silently changing patterns of force danced across the printed circuits. The muted whirring of memory banks echoed busily within the metal walls.

It stood four-square on sunken concrete piles, resilient pads, and insulated matting; an intimately charted enigma shrouded in dulled metal.

Johnston sat at the answer screen like a cat at a mousehole; a cat that knew the mouse would never come out.

Then the humming stopped abruptly. There was a scintillating flash of static in the cool depths of the screen; the overload fuses had blown.

And that, thought Johnston bitterly, is that! Ask a damned silly question—and you’ll get a damned silly answer. Man is a flash of static on a viewing screen—the cold hand of death on an eager machine.

He looked up at the dead monster and sighed.

Then Margot was at his elbow; pressing across to look at the tape, shouting instructions to the small group of technicians, flicking switches The picture of a confident man—one who knew that he knew his job.

He turned to Johnston now, his earnest enthusiastic features towards the other, the mobile Latin face impressing a thousand nuances on the flood of words:

"The machine did not answer? It must be the phrasing—the data. She has never overloaded before. Never! What is this question you ask? Why am I not told? I do not like this way of working."

He shrugged impatiently. "Orders! Always orders! What am I? Only a poor engineer. I could not understand matters of policy."

Then the fine scorn in his voice vanished and Johnston ceased to be an audience; the engineer's tone softened: "But you are not happy either. I am sorry. We like to please, my machine and I."

Johnston packed the grayness into a corner of his mind and smiled. "It's not your fault," he said, "nor the machine's. It's the question,"

"Then . . . ?"

"Ask another? Change the approach?"

Margot nodded. The wish to justify shone from his eyes.

Johnston shook his head. "We've asked others before. This is basic. A four letter phrase—"

He stopped abruptly, realising that his tongue was running away with him. This depression was making him careless. He nodded curtly at the other and walked away.

Margot watched him for a moment, then shrugged, and turned back to his machine. It was predictable.

A deep room; stretching from the sunlit summer of a great curved window back into the artificially lit depths of the building's interior. A high room; perched a thousand feet above the city; saluting distant mountains through the clear, chilled, upper air.

Johnston walked down the room from winter into summer. He walked slowly with downbent head watching the pattern of the carpet lightening beneath his gaze.

A man rose from a desk at the window and came towards him; a silhouette brightening at the edges, then fading into clarity.

"Another failure."

It wasn't a question—just a simple statement.

Together they crossed to the window and looked down on the city. The woven threads of autoway lanced the sparkling splendour of the buildings; light gleamed and glistened in a million reflections.

"You love this view," said the other abruptly—almost accusingly—to Johnston.

"Yes," came the simple answer, "it's the greatest view in the world for a man."

"It's good for the ego." There was a dry bitterness in the other's tone that stripped the words of meaning and made the phrase a vessel

of despair.

He turned to his desk and sat down, pulling a book towards him. The pages turned and fell beneath his touch with an empty sound. Johnston joined him reluctantly.

"That was the last of the mechanical ones," he said.

The other's gray, gaunt arid features bent silently over the book.

"There's always Jossel," continued Johnston desperately. "But he'll have to be told. He's not like the others."

The gray man turned towards him.

He looks like a dead world spinning in an empty void, thought Johnston. The urge to rouse his companion clamoured in his brain. He forced a smile.

"We've searched the likely places, and that's never where the answers are. Jossel is trustworthy. I'll go and see him."

The gray man nodded and pushed the book wearily aside.

"You can always try," he said.

Jossel lived in the mountains, as far from the city as he could decently get. His home was simple—by city standards—a transparent canopy of plastic covering a small plateau.

Johnston edged the helop down gradually, looking for a flat open piece of land. There was none—the dome covered the whole plateau. Angrily he jerked the vehicle around and circled outwards; about a quarter of a mile away he found a spot and landed.

He walked upwards and inwards over the rough ground, stumbling a little towards the end of his journey. Through the naked walls he could see Jossel, recognised from the dim, time-worn picture in his mind. He was standing beside a large tank quite near the wall, when Johnston rapped impatiently.

The wall turned opaque in an instant, wrapping the vivid figure in a milky cloud.

Johnston was startled; not at the blanking operation, but at the possible motive behind it. A dank fear clutched at his heart. What if Jossel didn't want to see him? Didn't want to help?

Then he remembered the Jossel of his youth; the man who hated machines, but loved humanity. Jossel would help—if he could.

"Who are you, and what do you want?" asked a voice from behind the milky shroud.

"My name is Johnston. I come from the President. You knew me in the old days . . . at Santa Rosa . . ."

The canopy rose like a morning mist and carried the barrier with

it. Jossel stepped towards him.

"John," he said "it's been a long time."

They sat under the neat lines of the plastic sky and talked. Johnston watched the other carefully; phrasing his request in his mind; rejecting, reforming; waiting for the right moment . . .

At last the echoes of reminiscence died and the time was opportune.

"I've come to you for help," he said diffidently. "There's a question we must have answered."

Jossel smiled. "A question? Are there any left? What about your machines, John? They know all the answers—if you ask them properly. That's what you said in the old days."

A bitterness crept into his voice. "How you loved the pomp of metal; the hard authority of x and y and z ; the irrefutable equations! Have you lost your faith?"

"It will come," said Johnston, carefully controlling his anger, "but the machines must have the data. We need the answer urgently, if we're to break the Cycle," he paused. "The Crisis is due within the next ten years."

"So soon?"

"We've analysed the rhythm," said Johnston.

Jossel laughed shortly. "Your machines are good for jobs like that; they just love complex functions. Why can't they tell you how to stop it?"

The question cracked in the still air like a whip. Johnston heard it dimly. He was thinking of the Cycle . . .

The rise and fall of a thousand empires: the inherent instability of civilisation. Man, starting in the depths, struggling upwards; conquering his environment; building his monuments in stone and bronze and steel—until he breached the atom . . .

How many civilisations had gone before? The machines knew. They'd analysed the data—the earthy products of bygone ages, the time scale—and produced the Cycle.

There was an upper limit to civilisation. Reach this limit and the structure crumbled. And Man must start again.

This much everyone knew, for Johnston had published his results many years ago. But what they didn't know—for it had been quickly suppressed—was the imminence of the present Crisis.

Johnston and a chosen few had worked furiously and secretly to solve the problem. But the machines could give no method of breaking the Cycle. They'd analysed and correlated . . . and said the data was insufficient.

They'd asked a crucial question in their hard metallic voices: "What is a man?"

Jossel was talking. "I guessed when I read your results five years ago that something was wrong. The paper was unusual for you—too vague. I waited for the follow-up, and when it didn't come . . ." He shrugged. "It was all too obvious."

Johnston flushed. "It was all we could do," he said defensively. "Premature knowledge would only have precipitated the Crisis."

"And what was your question?" asked the other.

"*What is a man?*"

Jossel threw back his head and laughed. His teeth flashed white and startling in the strong dark face.

"What is a man?" he mocked. "The unknown in all your equations, John!" A chemical compound! Action and reaction!"

He faced the other still smiling. "That's only one question. There are ten thousand million men. That's ten thousand million questions."

"No!" said Johnston quickly, halting the panic in his heart. "There's an underlying essence that is common to them all—there must be!

"We've got to find that essence to complete the data. Without it the machines are powerless."

"And so you came to me?"

"Yes."

"Why?" asked Jossel. "Am I the only one to look for another approach? to spurn your metal monsters? I work alone. I haven't published a paper for years."

"That's why," said Johnston eagerly. "Everything else is in the machines by now. If the answer was there we'd have found it. But there may be a clue in your recent work."

"I have an answer."

Johnston looked at the graven features in a disbelief that faded gradually into hope. It isn't possible, he thought. But he studied the man before him, and knew with sudden certainty, that it was.

"But you can't use it," said Jossel.

"Why?" asked Johnston with soft impatience. "Why?"

"You have the answer inside you," said Jossel. "Shall I show you?"

Johnston moistened his parched lips and nodded.

He lay in the large tank on a bed of pliant padding. Jossel looked down on him and spoke:

"Two injections then I'll close the tank."

"What will happen?" asked Johnston nervously. He thought



yearningly of the impersonal machines.

"It's a psycho-probe. You've seen one before. They're used in psycho-analysis to avoid any patient-doctor reaction. It asks questions—and you answer. The drugs are merely used to remove any inhibitions."

"Will I know what has happened when I'm released?"

"It'll be recorded."

Johnston felt the needle pierce his arm . . . once . . . twice . . . He lay and waited.

A soft lazy warmth spread through his body, and his surroundings faded so imperceptibly that he barely noticed the lid of the tank closing, blanketing him in utter darkness.

A small voice spoke in his ear; a vibration in the dark around him. He answered effortlessly—a thought into the ether.

The thought returned . . . illogical . . . senseless . . .

He rejected it.

The small voice spoke again . . .

The gathering rhythm of question and answer reverberated across the emptiness; beating down upon him; eroding the fixing field of knowledge; tearing at his subconscious.

He fell helpless into a great abyss; tossed on the pulsing beats . . .

"Feeling better now?"

A form hovered over him and crystallised abruptly. It was Jossel holding a cup towards him.

He sat up slowly and painfully, the memory of emptiness nagging at his mind. He took the cup and drank. The cool liquid eased his body, and the ache in his brain faded. Memory flooded back.

"The answer . . ."

"It's all there," said Jossel quietly. "As logical as the human mind can make it. No man can ask for more."

They listened to the tape in the open air. Johnston relaxed in his chair and drank in the clean, fresh air thankfully. The voices from the speaker seemed distant and unreal, like an intrusion from another dimension.

"Was I in there long?" he asked abruptly.

Jossel shrugged. "About an hour. You knew a lot of answers." He paused. "Shall I turn to the end?"

"No."

But the frequency of the responses was slowing gradually—an edge appearing on Johnston's other voice. He started to sweat.

There was a click and a sudden flicker of sound.

"I think you had better just hear the last part," said Jossel.

He opened his mouth to reply—and froze as the recording slowed to listening speed. A voice was ululating in his ears—his voice! He felt remembered terror gelling his mind—and then the words and meaning slowly penetrated his understanding . . .

Jossel watched him pityingly.

"Your essence," he said. "Can you feed it to the machines? A machine is a tool—a tool to deal with our environment. It's maker is always beyond it's comprehension. If he isn't . . . it's no longer a machine.

"To give that answer to the machines would be giving away your birthright—our birthright. There are no tools to change humanity. It must change itself."

Johnston walked through the darkening air. Question and answer alternated hypnotically in his mind, pulsing in rhythm with his footsteps.

"What is a man?"

"I am!"

"What is a man?"

"I am!"

The answer was unique . . . but it was an answer!

He heard Jossel's voice in his mind: "Can you feed it to the machines?"

He laughed and shouted his answer to the trees:

"Yes!"

Up on the mountain Jossel sighted a missile on the distant helop and waited for it to rise. He couldn't have used it on a man, but the cold friendless metal of the flying machine was a different matter altogether.

Why did it have to be Johnston, he thought. Anyone else would have seen the impossibility of giving that answer to the machines; the consequences of feeding the ultimate principle of life to an organised mass of electronic connections.

We're not ready to give up yet! he thought fiercely.

Dimly over the trees he saw the helop rising. He pressed the firing button and stood for a moment watching the almost leisurely hunt of the missile.

The flash came over his shoulder as he turned.

Down Rover Down

*Man was to find everything he didn't expect
on Mars, even a reception committee !*

Illustrated by Harry Turner

He'd gone two-thirds of the way when it happened. There was no reason to expect it. The Moon had been won and Venus conquered, ships lost and martyrs made, experience gained and lessons learned. Now he was bulleting to Mars in a vessel vastly superior to the first Moon-boats. Everything that could be anticipated had been taken into account and guarded against. In theory the odds were proportionately greater in his favour.

But there are and always will be things no man can foresee. Confiscation of the Moon and mastery of Venus represented humanity's expansion inwards, towards the Sun. This, the first Mars-flight, was the first thrust outwards, away from the Sun and more or less heading for the great concourse of stars. That made all the difference, an immensely significant difference that no expert had taken into account, no ingenuity could overcome.

So at the two-thirds point he hit the blanking area and dived into it unaware. The engines continued to roar without falter or cease. Nothing was visible save the hazy mist of stars and the pink target slowly swelling ahead. No strange body made a blip upon his fluorescent screen, no other flame-trail was detected by his thermocouples.

Two moons had become visible to the naked eye before it dawned upon him that all was not well. First he noticed that the output meter of his pulse transmitter was registering zero despite that the apparatus seemed to be functioning. Back on Earth they were depending on that constant emission to keep radio-track of a body far too small to be followed with telescopes. Without it they lost him unless he resorted to the vocal beam and used it long enough to enable them to take new bearings.

Hurriedly he switched on the main transceiver, spoke through his larynx microphone. "Do you still get my beacon, Earth? Do you still get my beacon?"

He repeated it at least twenty times. In all probability the answer would be unintelligible, a distorted muttering amid a mess of static. But any response at all would serve to show that he had been heard. He strained at his ear-plugs and picked up nothing, not a sound, a voice, a murmur. Not even band-noise, backwash or the faint hiss of solar energy.

"Carlów calling! Carlow calling! Do you hear me, Earth? How is my beacon? Come in, Earth, and say whether you are getting my beacon!"

No reply.

On this transmitter, too, the output needle should have wagged in sympathy with the varying amplitude of his voice. It did not stir by a hairbreadth. He checked feed-cables, found nothing wrong. Power was pouring in, none squirting out. There was a transistor-tester among his numerous servicing instruments but how could he use that? One cannot control a racing vessel while partially dismantling and repairing a jigsaw puzzle of radio components. The tester was strictly for use when landed and not before.

By the looks of it he was going to skid through the red dirt of Mars while those who had sent him were mourning his end. To their minds sudden silence could mean only one thing, namely, disaster born of causes unknown.

Soon he was going to experience a major triumph they could not share because the means of sharing had been denied them. The onus lay upon him to restore communication immediately after landing. He would do his best but wasn't sanguine about it. He was a space-pilot rather than a radio expert. No man can be master of every conceivable skill.

A couple more times he called without slightest response. Definitely the link to Earth was broken and had been broken for quite a while. He'd no way of telling how long.

Further efforts were futile because the landing now was too close at hand. He thundered across the orbits of Phobos and Deimos with the vast face of Mars extending far beyond the capacity of the observation-port. No time to study the face, not a moment to spare for curious examination. It took all his strength, ability and single-minded concentration to bring the ship down without damage.

The Martian horizon swayed across the port as he swung the ship into a shrinking orbit around the planet. He took her round three times before velocity, angle of declination and nature of terrain were all just right. The vessel belly-skidded along a flatland that was not red but gray-green with a thick carpet of lichens. The tail-end roar ceased for

the first time in many, many days. This was it, the hour of victory, the long step toward the Asteroid Belt, the Outer Planets, another solar system, an endless, uncountable multitude of worlds.

Yet he did not howl with the glory of it, jump around, wave flags, sing songs. He lounged in his seat, sweating and exhausted. Now was the moment that would inscribe his name in history books in letters of gold but like all such moments it proved strangely matter-of-fact, humdrum, lacking in great thrill. The reaction, of course, following a long period of intense nervous strain. The aftermath.

A few minutes crawled by before he recovered and stood up for a better look through the port. He gazed with sleepy-eyed lack of comprehension at a dark circle across the lichens, the shadow of something huge and round standing alongside his ship.

His ears were equally reluctant to register when they heard an authoritative hammering upon the airlock door.

The control-cabin's ports permitted a field of view covering a fraction less than one-eighty degrees. There were no other vantage points from which to look around, no side-ports, no vision possible from the tail.

He could stand by the instrument-board and survey a great sweep of alien territory that included nothing alongside or behind the ship. To see the rest he must blow the steering-jets lengthily and with enough power to edge the vessel around, wasting precious fuel and risking serious damage to the armourplate shell. Seven hundred tons grinding through an arc of ninety degrees would be more than enough to tear the belly-skids from the body.

Alternatively he could go out through the airlock and take a look in person. He'd intended to do that very soon. If all had gone as planned he'd have donned a closed-circuit oxygen mask, taken a colour-plate camera with him, set the instrument on its tripod and made a record of himself posing by the ship. The picture of the year if not of the century.

But all had not gone as planned. The veteran advisers of Lunar and Venusian expeditions had no cause to expect what was taking place right now. They had provided instructions and advice, food, water, drugs, oxygen, signalling apparatus, instruments, weapons, every possible scientific contribution toward survival and success.

The one thing not provided was a safe way of answering the door when somebody—or some thing—knocks.

What's the answer to that? There are two and only two. Open the door and take a chance. Or stay in and sit tight, perhaps for ever.

Knock, knock!

Could it be a wind-stirred branch belonging to an adjacent tree? Not likely. He had seen no tree when skidding across the lichens. There wasn't a tree in sight from here to the horizon. Nothing but the gray-green sward and, far away on the skyline, a huge, ragged outcrop of red rock.

What else? Metallic pebbles leaping into the ship's magnetic field? No, the rapping was too deliberate and methodical for that. It sounded exactly like the summons of an imperative hand—in a vast desert where there was no hand.

Knock, knock!

The round shadow remained upon the lichens without moving or changing form. No other shadows extruded from its rim. Nothing stirred on the landscape, nothing winged through thin air, no bizarre figure advanced over the skyline. Mars was a dead world exactly as astronomers had declared.

Knock, knock!

He could not stand it any longer. The risks involved in getting here were more numerous and deadly than the danger of opening the door to an unknown caller. He had survived the former. Surely he could meet and beat the latter. Nothing ventured, nothing gained. He who hesitates is lost. And so on.

Analytical instruments told him that he'd need a mask at least temporarily. Sometime he could do without it. One can become accustomed to rarified atmosphere, endure it without artificial aid providing activity is not too strenuous. Men had discovered that fact atop Everest many centuries ago. But for the time being he must use a mask.

Fastening one over his face, he checked its tank and supply hose. The feed-valve went *click-click* as he breathed. He took a pair of snouty blued-steel guns from a drawer, shoved one into a side holster, gripped the other in his right hand. Then he got down on all fours and crawled through the short tunnel leading into the airlock.

The inner door closed with a sigh. He broke the seal of the outer door, heard Earth-air hiss as it joined that of Mars. It sounded like an angry serpent. Whoever had been knocking should take that as a warning and stand clear.

He stationed himself strategically behind the door, gun held ready, as it swung inward on heavy hinges. The door opened full width, letting sunlight pour into the chamber. Nothing entered with it.

Bending, he took a swift look at the airlock rim. All that he could see was the top of a metal ladder propped against it. A ladder? Who

the deuce could produce a ladder at a moment's notice and position it in readiness. There was something dreamlike about this, in fact nightmarish.

Stepping boldly into the rim he stared out, saw the man waiting at the bottom of the ladder.

It was anti-climax with a vengeance. A mere man. A plain, ordinary man who looked as if he might be the corner grocer in his Sunday best. The man gazed up at him with a slightly officious air while he looked down in open stupefaction.

There was compensatory startlement in what stood behind the man, the thing that had cast its shadow like a menacing promise of coming events. A great silvery globe of diameter twice the length of the Earth-ship. A monster metal ball with copper-coloured rings protruding from its surface in symmetrical array.

The first thought that whirled through his mind was a natural product of the environment in which he had developed. "Some other nation has beaten us to it. We've made it too late."

Further speculation was halted when the man down below said pointedly and in perfect English, "Why the gun?"

Carlow eyed the weapon as it sat in his hand and answered confusedly, "Why not?"

"Guns create guns," said the other. "And shooters get shot." He made a gesture. "Well, you've come all the way here. Are you satisfied merely to stare at it from up there? Don't you want to stand on a new world?"

"Obviously I won't be the first. I am disappointed."

"So are we," said the man. "And likely to remain so for some centuries to come."

"What d'you mean? Having got here ahead of me you should be overjoyed."

"That is one viewpoint. There are others."

Firming his lips and absorbing oxygen through his nostrils, Carlow mulled that remark then said, "I can think up a reason why you knocked for a neighbourly chitchat."

"What is that?"

"Your ship is out of action and unable to return. The arrival of mine is a gift from the gods."

"Yours won't get back," said the man. "Never."

"It will."

"Sorry," the man persisted with strange self-confidence. "But you are mistaken."

"I don't think so. Stick around and watch me take off."

With that he pointed his gun at the other and started backing into the lock, his left hand stretching to close the door.

The man on the ground made a brief signal to the great metal globe. Carlow shot out of the lock, drawn by a dozen irresistible pulls. The gun was torn from his hand as he dived, the second weapon was ripped from its holster. His arm was lugged forward as his wristwatch tore itself loose. All the buttons leaped from his uniform jacket.

He landed flat on a thick cushion of lichens, gasped for breath, picked himself up. A ragged hole showed in the left of his pants where a small bunch of keys had taken the shortest route out of his pocket. It wasn't until he came erect that he realized the mask had vanished along with the rest.

His opponent was facing him tendering the mask with one hand while holding a purloined gun in the other. He took the mask, fitted it on. Its tank was dented, one of the straps broken, but it was wearable and still functioning. He drew oxygen thankfully.

"You won't need that thing in due time," assured the other, watching him.

Carlow glowered and said nothing.

"Unfortunately though, I need this." He gestured with the gun. "I have to deal with you in the only manner your kind understands, namely, with a weapon. Get walking."

"Where?"

"Round to the other side of our ship. You'll find a gangway. March up it."

"You can go to hell," said Carlow.

"Courage and stubbornness are not the same things," remarked the man, speaking as one would to a small child. "Neither is abuse an effective argument."

"Soul of wisdom, aren't you?"

"I pretend to nothing." The other smiled as if at a secret thought, added, "You may call me Harry. One name is as good as another on any world." He waved the gun again. "You can proceed on your own feet or be carried. Please yourself."

There wasn't much choice about it. The momentary magnetic field that had robbed him of all susceptible metal in response to a signal proved that there were others in the metal sphere, perhaps a dozen, perhaps twenty or more. At any rate, enough of them to cope with a solitary mule.

With bad grace Carlow walked as told, the man named Harry—if

that was his true name—following with weapon in hand. Carlow kept his thoughts to himself and they were plenty. What damage had been done inside his own vessel by sudden immersion in so powerful a field? What critical instruments had been put out of action for keeps?

Yours won't get back," the other had said. "Never."

Supposing it didn't, what then? Was all hope lost? He did not think so. Despite intense nationalistic rivalries, Earth was a world considerably shrunken by ultrafast transport systems and vast communications networks. It was well-nigh impossible for any nation-sized group to retain a major secret longer than twelve months.

Over there, across the void, three thousand millions were living cheek by jowl, with rumours spreading fast among them, information circulating openly or surreptitiously at top speed. And there was no place to hide for any lengthy period anything so large and highly technical as a space-vessel far ahead of its time.

Mere possession of only one such ship implied the existence of an advanced technology backed by formidable industrial resources. Once upon a time, in the long, long ago, a huge complex of factories and laboratories had been needed to produce the first supersonic rocket. To-day, with a thing like this globe in plain view, the facilities behind it could be no smaller. It wouldn't take Earth long to learn the source of this space-conquering tool.

Right now he couldn't hazard a simple guess at who had reached Mars first and was acting tough about the holding of it. He probed at the puzzle by trying to determine the nationality or racial characteristics of this fellow Harry. It defeated him. Harry was of no readily identifiable type, his speech was devoid of accent and noteworthy only for being stiltedly correct.

"Up there," ordered Harry as they reached the gangway.

Obediently walking up, Carlow entered a large airlock, stood side by side with his captor while the outer door closed, the inner one opened. He removed his mask, let it dangle in one hand. A nudge with the gun sent him into a long metal passage.

It was here that he halted, involuntarily paralysed by sight of one of the crew.

The thing strolled casually from a door on the right, crossed the passage, entered a door on the left. It did not so much as glance at him. It couldn't, because it had no eyes.

It was four feet high, broad, with flexible legs, thin, rubbery arms terminating in digits that had the sinuosity of snakes. There were two

breathing holes and a wide mouth in its green and scaly face, also feathery antenna protruding from its hairless head. It wore clothes of outlandish cut and sported some kind of insignia on the shoulders of its jacket.

Gazing through the door at this departing vision, Carlow ejaculated, "What's *that*?"

"A Hythian," said Harry. He prodded with the gun. "Keep going. You'll see more types before you're through. And in due time you'll get used to them."

He was right. Around the corner another and completely different creature side-stepped into a doorway to let them pass. This one was tall, gray and skeletal. Its brilliant yellow eyes surveyed the prisoner with no surprise, no especial interest.

Farther along they encountered two more as different again. One was a quadruped with tiny hoofs like a gazelle's. It clattered past with open unconcern, followed by a crawling thing that seemed all eyes and tail.

"In here," Harry ordered, pushing a door open.

Entering, Carlow stared around the tiny cabin, hardly heard the door close and lock as Harry departed. There was no port through which to examine surroundings. A folding seat lay against one wall. Pulling it out, he rested on it, strove to halt the mad whirlings of his mind.

His guess at a disabled first-comer obviously had been a stupid one made in the confusion of the moment. The great globe had not been there when he'd landed, otherwise he could not have failed to see it. Therefore it must have arrived after him, within a few seconds. Such promptness suggested that it had followed him down from some point of ambush within the star-spangled darkness.

Equally as mistaken was his theory of Earth-origin. Conceivably some nation could produce a vessel like this one. But from nowhere in the wide, wide world could it dig up such a crew. So from where had the big sphere come? What was its origin? It defeated him completely.

He was still battling this problem when an upward surge told him that the vessel was lifting. Then it shifted to a sidewise motion. Acceleration was wonderfully smooth, with no thunder of rockets, no vibration through the shell, nothing but a low, almost unheard hum. It did not last long. After forty minutes he felt the sensation of descent, the slight bump of ground-contact.

Gravitational pull remained the same as before. That told him the ship had not soared to the nearer moon. They were still on Mars.

Nothing happened for another hour during which he mooched idly around the cabin, took an emergency ration from his pocket, ate it

*Harry Turner - 55*

without tasting it. He tried concocting futile plans for escape, most of them violent and bloody. But deep inside himself he knew there was no escape.

Eventually the door opened and Harry entered. "No gun this time," he said. "The need for one no longer exists. We have thrown your weapons away." He measured Carlow with sharp gray eyes. "Don't let that fact tempt you to try anything rash. It will serve only to annoy us."

"Aren't I entitled to be annoyed?" demanded Carlow.

"No."

"Why not?"

"The question of your rights has yet to be settled. That will be done with the minimum of delay." His expression softened as he went on, "I regret that you have not been given a meal but you may have one now, if you wish"

"I'm not hungry. I could do with a drink, though."

"A stimulant?"

"Preferably."

Harry brought one. It looked like ginger pop, tasted like a mixture of pear-juice and old brandy. Carlow drank it, said, "Hah!" and felt a

bit better.

"This way," ordered Harry.

He led the other along the corridor to the gangway. Nobody passed them on the way. The huge vessel seemed empty, devoid of any other living soul.

Carlow toyed with the notion of jumping his guard while the going was good. It was a strong temptation. He resisted it, deciding to bide his time. A better opportunity might arise later. And he wasn't dead yet.

Outside, the gangway pointed toward a heavy metal door set in the face of a red rock wall. Together they marched through the doorway, along a wide, smoothly cut passage penetrating deep into the cliff. They reached a large, oval-shaped room with semi-circular tiers of seats rising at one end.

That was where Carlow got the heebies again. The seats held an audience the like of which no Earth-born eyes had seen before.

Permitting himself to be led to a cushioned bench placed in the middle of the room, he sat and stared dazedly at the assembly. His concentration was such that he was only dimly aware of Harry taking a seat beside him.

There were thirty-eight of them over there. He counted to make sure. Yes, thirty-eight. And no two of them alike. Most had eyes but a few had not. Most had arms and legs but some had other things. Only a couple of them verged on the humanlike. One of these had a neckless head fixed rigidly to his shoulders. The other was the size of a marmoset.

They ran the gamut of size, shape and colour. They surpassed anything in his wildest dreams. And they sat there silently surveying him with judicial calmness.

Harry leaned across and whispered, "Take it easy. I'm official interpreter. I'll tell you what is going on. Don't interrupt—it will do you no good whatever."

The centre figure in the front row stood up, pressed a stud and caused a gonglike note to sound from a metal hemisphere set in the wall. Opening a thin, purple-lipped mouth, he spoke in sibilants resembling a wavering hiss. Harry translated in low tones.

"Friends, again we have to determine right of entry with formality according to law. An example of the lifeform concerned sits before you now." His large, slot-pupilled eyes turned towards Harry. "Being of the same shape and form and familiar with the subject's language, our brother of the Sirian group will interpret these proceedings for the subject's benefit."

"What the hell is all this?" growled Carlow, fidgeting.

"Hush!" warned Harry. "You'll find out. Be patient."

"God damn it, do I have to squat here like a felon while ——"

"Shut up! Curses and emotion are regarded as symptoms of irresponsible childishness. The least you can do is behave like an adult."

Carlow subsided, scowling.

The speaker continued, "I call upon our brother of the Rigellian group to state the case in favour."

He—or it—sat down. Another stood up, a somewhat reptilian creature holding a wad of papers in a very humanlike hand. The way he cleared his throat before beginning was also human.

This one launched forthwith into a eulogy on the men of Earth. He did not colour it, distort it or lard it with mere opinions. He confined himself solely to facts, all of them flattering. He said that during the last two hundred Earth-orbits they had climbed from progress stage eleven to progress stage seven. He spoke warmly of their many virtues such as care for the aged and the sick, love of lesser animals, pity, self-sacrifice and so forth. It took him a full hour to get through his speech which, in its purely factual way, was an able performance.

Finally he resumed his seat and the first speaker arose. "I call upon our brother of the Centaurian twin worlds to state the case in disfavour."

Another creature stood up, tall, chameleon-eyed. For some reason best known to himself he was wearing plastic filters in his nostrils. He had no papers, no hands with which to hold any. In a voice near the top of the audio-band he uttered a few words with an air of finality, resumed his seat. Harry did not bother to translate what had been said.

Again the first speaker came up. "Friends, you have heard summaries of the cases for and against. Is entry permitted?"

A unanimous, "No!"

"That is the decision of the associated species," he said. "Let the records be shipped to the central co-ordinating board as evidence that the law has been observed." His attention shifted to Harry. "Inform the subject that this verdict may be reversed when justification is found in the future."

Harry repeated it to Carlow, added philosophically, "That's that!" then conducted him back to the globe-ship and the cabin.

"What does all that business mean?" demanded Carlow.

"It means the time isn't yet. Earthmen are banned from free space."

"How are you going to stop them, eh? It won't be easy, I can tell you that!"

Smiling, Harry said, "We'll process your ship and let it crash upon Earth. The time, place and direction of fall will show that it met disaster, drifted sunward, was pulled into Earth's gravitational field. What we have done to the ship will baffle and alarm your scientists. They'll require many years to evolve a theory to account for it, more years in which to devise a hoped-for cure. They won't send another vessel until they have solved the problem—or think they've solved it."

"What about me?"

"If we were of your kind," Harry told him, "we would deal with you swiftly and effectively. We'd take you out upon the sands, give you a minute for prayer and put a bullet through your brain."

"Why should you? I've done you no harm."

"Very true," Harry agreed. "That's how we see it, too. Therefore you will be transferred to a nice, lush world which we have reserved for those who know too much, those men we would not kill but must keep out of harm's way. Your life will be idyllic—but to Earth you will be dead."

Sitting on the edge of the bunk, Carlow thought it over. He cared little for his own predicament. All space-pilots are men ready and willing to face the worst, come what may. They are callous with regard to themselves. But this arbitrary condemnation of Earth's three thousand millions was something else. The more he thought of it the more it riled him.

"That lanky nightmare said something about us," he reminded. "What was it?"

"I'd rather not tell you."

"Come on, out with it. Surely I have a right to know. If it's undeserved criticism, why can't I answer it? They didn't give me that chance, did they? Do you call that a fair trial?"

"He made a statement that only we can confirm and you cannot deny."

"Well, what was it?" Carlow insisted.

Looking uncomfortable, Harry said, "He stated that yours is the only known lifeform that systematically slaughters its own young."

Registering bitterness, Carlow snapped, "That doesn't make dogs of us. Even if we haven't learned to keep the peace we are smart and tough and we keep going. Man's a rover, see?"

"Down, rover, down!" said Harry.

He went out, closed the door. The click of its lock sounded like the crack of doom.

Within an hour the ship lifted, taking yet another undesirable specimen to a planetary heaven that was also a penal colony.



Sunset

Illustrated by Harry Turner

Anton Rand considered that the funeral service which Neils had chosen was one of the most tasteful he had ever witnessed. Different from the sombre archaism of the old Catholic ritual and far more colourful than the new Unity Creed with its emphasis on starkness and hurry.

The man they were burying sat erect in a small pew halfway between the preacher and the congregation, listening avidly to the glib words summing up his life and achievements. He'd probably been filled with dope before the service, Rand guessed. It was the humane way and saved embarrassment.

The service was coming to a close. Reading from prepared notes, the preacher flung his voice about the high-vaulted sturch like a caged song-bird. One of the dancing girls sitting relaxed after her performance yawned and her neighbour stretched tiredly. Evidently Neil's hadn't been able to afford a top-line troupe—the whole funeral must have cost him plenty—but Rand reflected that the girls hadn't been all that bad. Some second string troupes showed as much decent emotion as they wore clothes.

A muffled hiccup from the stranger sitting beside him again made Rand feel a regret that he hadn't provided himself with a bottle and tube dispenser. The brief intrusion of outside feelings passed as the preacher wound up for his final peroration.

"And then, in the flower of his manhood, Neils Whitcombe suffered a tragic accident which cut short his career. His loss of usefulness to the State is great." The preacher paused and his head swung meaningfully to encompass the sturch. He went on, his voice a judicious blend of sorrow and vaulting confidence: "Under the wise laws promulgated by the benevolent State, Neils Whitcombe, no longer an asset to society but a dragging handicap, must make way for the unborn generations yet to come."

There was a stir and a shuffling of feet from the body of the sturch. Rand leaned forward on the comfortably upholstered pew. An expectant tension built up in the sturch.

This was the moment when fireworks might explode, when the man they met together to bury might hold back, might refuse, might do any one of a dozen abnormal things.

Despite himself, Rand looked towards the single black uniformed policeman sitting unobtrusively in the shadows by the purple-draped exit archway. The policeman rose to his feet. Rand shot a swift glance at Neils and felt a sinking sensation of relief as his friend stood up and walked a few paces, quite steadily, towards the arch. Rand was deeply affected by the ceremony. When Neils turned and his wife and child, sitting in the front pew, waved, Rand swallowed and the dingy brown and yellow walls of the sturch seemed lit up by the funeral's simple dignity.

State would look after Neil's wife and child, might even assign them another husband and father. For a moment Rand could share their confused and stormy emotions and then, like everyone else in the sturch, his attention was taken and held by the clear, belltones of a great organ vibrating from the rafters. Again Rand felt pleasure at the thoroughness of Neil's organisation. The organ recording was superb. Veiled

in that cascade of limpid sound, Neils parted the purple drapes and passed through the final archway leading out of this life. What lay beyond, between this moment and the time when what was useful of Neils' physical body was spread as fertilizer to enrich the ground, Rand did not know. That it was nothing to fear he was confident: beyond that simple credo he had never troubled to look.

In a snake-hipped line the dancing girls would down the aisle, smiles painted fixedly on blank faces, undulated out of the sturch. The preacher gathered his notes. Rand discovered his cigarette had gone out and puffed another selfig until the smoke came cool and fragrant. People were standing up and stretching. Sharp wooden noises spurted from the back of the sturch. The policeman had disappeared.

Rand gave his order for two postcard-size photographs of Neils and had to show his authorisation allowing him two pictures in place of the usual one. "Whitcombe was the son of a close friend of my father's," he told the clerk. The man sniffed suspiciously, but took the order. The sturch was emptying now, taking on that wan, dusty look of deserted public halls.

He went out into the sunshine, reflecting on the austere, simple beauty of this procession of life, the orderliness and inevitability of it all. The sun was westering across the city and there was a hint of evening in the air. He hailed a gyrocab, wondering if Netta would care to visit his father this evening and mentally preparing answers to her excuses. Netta was a good wife, State knew; but she had her moments.

And his father had never really got on with Netta, not since the time when Netta had wanted Rand's sister Ava to go to State Polytechnic and had been told to mind her own business. Rand chuckled at the memory after these years—State Polytechnics had never figured very prominently in the Rand family history—and swung aboard his gyrocab.

He dialled his destination and hit the starter button which closed the door with a soggy thump of compressed air and sent the gyrocab bounding into the air on a robot-controlled course for the city. A glance at his watch confirmed that Netta would be home now and he put a call through to their State housing unit, a single room type: when they were allowed children they would be assigned a larger unit.

Netta's voice was the crisply efficient voice of the typing supervisor. Rand often felt a vague sympathy for her pool of girls. Now, he grinned, conscious that he could change that impersonal tone at the appropriate moment.

"It went off all right," he said easily. "Old Neils looked quite pleased with the arrangements."

"Well, I hope you think it was worth an afternoon off, Anton."

Rand frowned. "Neils and I were friends, Netta. I couldn't let him go without saying good-bye."

"I should think the loss of half-a-day's pay more important."

"What do you think the men at the yards would say if I hadn't gone? After all, Neils was one step ahead of me —"

"And there's a good chance you'll get his job." Netta warmed at the idea. "If you think it wise to go, create a good impression —"

"It wasn't because of that!" Rand forced himself to calm down, knowing that his display of temper made it appear certain that that was just why he had gone. As for Netta, well, she wanted a child and Rand couldn't blame her for that. He said slowly: "I can't explain it, Netta. It's one of those things."

He felt thankful that State had not as yet installed videophones in the gyrocab—he didn't particularly want to see Netta's face at this moment. Although he could visualise the full lips' cynical droop and the pallid tenseness of her face well enough. He brushed the unwelcome thoughts aside and said with more warmth than he intended: "I'm going round to see father to-night. Thought I'd go straight there."

"What about me?"

"You could join me there. It's a long time since I've seen him."

"You know I wanted to see the Martian Sandshow—real people on the stage for the first time in ten years. Can't it wait?"

Rand had to make a conscious effort to prevent himself from meekly agreeing. He rid his mind of the vision of Netta's full lips pursed in that disapproving pout that so often shattered his resolution. Hell, it had been far too long since he'd seen his father, quite apart from the photo of Neils.

"I promised to take along Neils' photo," he said. "And working on central Control Panel and living alone in Widower's Row father would welcome a talk with another man. You know how lonely top-notch electronics men are."

"Your father's just an old left-over has-been," Netta said spitefully. "I'll go to the show alone. Good-bye."

Rand was left looking at the dead receiver. He put it back and shook his head. Determined not to allow Netta's outburst to sour him he sat back in his seat and stared out over the busy city. The sturch was on the outskirts, and as the gyrocab flitted at three thousand feet the whole sprawling complex of the city laced the horizon with steel and concrete. Sunshine was caught and flung from towering glass precipices, the air aswarm with midges of gyrocab and helicar, television masts

rearing like porcupine quills above the breathing back of the city. With all its vast scope the city never ceased to amaze Rand—that twenty million people lived there seemed to him somehow outrageous, as though a piece in the design of life had slipped.

He rubbed his eyes and settled down to read a pocket tape.

A violin's high, nostalgically-sweet song greeted Rand as he waited outside his father's room. But for the single thread of music the whole multi-storied block in Widower's Row was silent and Rand visualised with a shudder the honeycomb of tiny cubicles each containing a solitary, lonely man working on with nothing in his future but memories of his past. The violin fell silent and the door opened.

"Anton! Come in, boy, come on in. Didn't expect to see you."

Rand followed his father into the room, noticing with a reappraising eye the old man's stoop, how grey his hair had become and the startlingly brittle look of his wrists.

"Hi, Dad," he said conversationally and seated himself at the old man's gesture in the single chair. The fiddle lay on the floor by his feet and lights glanced from its loving polish. "How've you been?"

"Oh, so-so." Corbon Rand gave a conspiratorial wink and rummaged under his bed. "This calls for a celebration and this is the stuff to celebrate with."

The bottle was square and old and contained a purple liquid which bit into Rand's throat like a wildcat.

"Where'd you get this?" he coughed, looking respectfully at the bottle. "This must be bootlegged."

Corbon Rand grinned like a wizened gnome. "'Course it is. State would never allow us anything this proof. Old Ben Addams down the corridor gets it. Queer cuss, Ben." Corbon Rand stretched out on the bed.

Rand handed over the photo of Neils.

"Another one gone," Corbon said softly. "Old Whitcombe was a good pal. Pity about Neils. State's not always right, y'know, son."

"Father!" Rand said sharply. Then, as the old man wheezed with a silent fit of coughing: "What's the matter? You are all right?"

"Sure." Corbon wiped his mouth. "Sure, son. Got sent for to-day and had a medical. Routine check-up."

"Well?"

"Oh, they gave me three days off work. They are quite considerate."

"Tell me!" Rand's voice was hoarse.

"I'm telling you, son, aren't I? They gave me three days to make

all preparations. Then —"

"So it's come at last." Rand felt confused. He could see the violin, lying by his feet, and its melodies echoed in his head, bringing back memories of his childhood, of the family, laughing and full of vitality and sparing never a thought to the inevitable day when they would leave it all.

"Guess I'll have a quiet funeral," old Corbon was saying. "Can't afford a lavish do, anyway. Y'know, son, since your mother died I've not really cared about much. I'm rather looking forward to the rest."

Rand brought his thoughts under control. "I'll attend to the details, Dad," he said. "Don't suppose you'll want a dancing girl troupe; but I'll hire the best preacher and the finest music —"

"If only you could do it in your own sweet time," his father burst out suddenly. "This 'You've got three days preparation, Mister Rand' stuff makes you feel so damned impotent. Oh. I know it's logical; but it's so cold blooded."

"I don't remember the old days." Rand took out a packet of selfigs. "It must have been rather terrible to see cripples, and old helpless people on the streets. And to know that somewhere in the world other people were starving for the food those useless mouths were eating. We do things decently to-day."

Corbon waved away the offer of a selfig and Rand drew in harshly. His hand was shaking, he noticed with mild astonishment.

"That's just it, son." Corbon drank again from the square bottle. "We do things decently. I know there's barely enough food to keep us all alive, that married women are queuing up to have children. Some Woman, somewhere, is going to be glad I'm dead."

"That's a direct way of putting it —"

"It's true, isn't it?"

"Yes. It's true. If you cannot work then you must give way to those who can. And the race must go on so there must be children. Pray that things don't get so bad that people have to give way just because they are old. Life would be a worse rat-race then than you could imagine."

Corbon laughed cynically, the sound a rattle in his leathery throat. "It'll come, boy. It'll come." He got off the bed and picked up his violin. "The devil of it is, Anton, I don't want to die. Not yet, anyway. What man does? I haven't been brought up in the system, the system that balances things so finely on an ideological edge. State has trained you youngsters well; like Neils, you'll obey the final order and walk through the purple archway, proud and without another thought in your

heads. But for us older folk, it's not so easy."

"I said I'd make the arrangements —"

"Arrangements! I remember the time when the saving of life was the noblest aim, when doctors slaved to keep a man breathing a few extra hours, when Rhesus negatives had blue babies given a whole new blood circulation, when spastics were trained through years of devoted work —"

"But that's all wrong! You're just prolonging the weaknesses of humanity, storing up trouble for the future."

"I know, son. I know. But it seems wrong to me, somehow, that you shouldn't make any attempt to save a man's life, give him artificial limbs, silver plates, all the fittings, just so you keep him alive."

"And if you save a weakling's life, what about his children? And their children?" Rand asked doggedly. "You just infect the human race with disease, spreading it wider and wider instead of cutting it off cleanly."

"That's true, I know, and that makes it all the more devilish for me. In a few years time all we old folk will have gone and you can begin to build your world over then. We haven't been brought up to ideas like this, we reject them emotionally, no matter what logic might say. I just don't want to die, not this way, and yet I can't see any alternative."

Rand stood up, feeling awkward and very young. He had never heard his father talking like this before: but then, his father had never before been told that he had three more days to live. It was natural that deeply hidden emotions should come out at such a time. He said diffidently: "I'll come round and see you to-morrow. Let you know what arrangements I've made."

"Goodbye, son." Rand felt a chill at the way his father spoke those words.

Widower's Row seemed even more blank and cold and mercilessly uncaring as he went out. The violin began to sing again.

The Thames yard of Interplanetary Shipbuilders Limited thrummed with activity. Immaculately overalled men pressed buttons and electronic brains sent steel implements powered by multi-horsepower motors into effortlessly complicated production schedules. Rand had been at his machine for five minutes when the Works Manager called for him. The manager's office was wide and white and full of sunshine, and a little overpowering to Rand, standing expectantly on the deep-pile rug.

"Yes, sir, the funeral went off well," Rand said, relieved that he

hadn't been called here for a roasting. "Whitcombe had arranged everything flawlessly."

"Good." The Works Manager was pudgy and florid, and his eyes flickered from blotting pad to ceiling, from telephone to window, and never met Rand's in an honest look. "A pity about Whitcombe. He was a good worker. However, it means that his floor job is vacant and I'm appointing you to fill it."

"Why—thank you, sir." So he'd got the job! Elation filled Rand. This would mean a better housing unit and might mean a child for Netta. His pay would go up, too.

Some of that elation evaporated at the implication in the manager's next remarks.

"You'll serve a month's trial period, Rand. I hope that you will prove suitable. In fact I have every confidence in it. But the Company cannot take risks and the wrong man in charge here could cost them a lot of money."

"I understand, Mister Slattery. I'm sure that I can give good service." Rand left it at that, knowing that the manager lapped up flattery and feeling perversely unwilling to give it.

"Well, then, that's settled. Now, Whitcombe had been taking great pains with the new passenger model—the P.One—and I want you to devote most of your time to the final pre-flight trials. They must be finished inside three days." Slattery waggled a yellow pencil at Rand. "You know this model and what the Company hopes to do with it. A cheap runabout that can take a family to Mars or Venus without a great deal of trouble and is entirely automatic."

"I know, Mr Slatterly," Rand nodded. "It's a great step forward."

"You'll be responsible for pre-fighting your sections of the work and I want that model ready to space in time for overseas buyers the front office have invited. It's a devil of a nuisance that Whitcombe had this accident; but his loss is your gain." Slattery looked straight at Rand for the first time during the interview. Rand met the gaze from Slattery's cod's eyes; but they made him acutely uncomfortable.

"Rand, I know this thing has fallen into your lap; but if you run into trouble, come and see me at once. You understand that, any sort of trouble at all, come and see me."

Rand caught the distinct suggestion that Slattery meant more than he was saying. Anyone who promises help in a confidential tone, with the self-importance underlying it so thick you can see them preen, creates an awkwardness, raises the hackles on your neck. Rand coughed and looked at his feet and felt embarrassed.

"Very good, sir." He kept his tones formal.

Slattery waved him away and Rand went out, wondering as soon as the door closed what Netta would say. If he failed this chance of promotion she'd never forgive him. That was for sure. Meanwhile, they'd go on living in their sickeningly familiar housing unit and Netta would press him even more for money, and there'd be no holding her about having a child. Rand toyed with the idea of not telling Netta; but then, he shrugged, she'd find out soon enough. She was like that.

The rest of the morning was spent in Neils' office, sorting through the dead man's papers and taking up the pre-flight schedule of P.One where it had halted so abruptly. The mid-day hooter caught Rand out flat. He'd no idea it was so late, and as he went with the rest of the shift out of the workshop and along to the elevators he quite naturally went with them into the freight elevator. He became conscious of questioning glances, quickly hidden under bland smiles as he looked around.

Then he had it. As a floor foreman he wouldn't be expected to break minor regulations and ride in the forbidden freight elevators like the workmen. Habit had betrayed him into a false situation. These minor rules were broken as a habit and Rand thought no more about it than any other workman; now, after being lifted out of the herd, he was resented for thrusting himself where he wasn't wanted. He rode the elevator down into the basement in a grim silence and was conscious of the snapping of tension when they all walked through into the canteen.

The low wide room was filled with the murmur of men and women, their plastic utensils sending up a muffled scraping quite unlike the clatter from rare chinaware. The whole expanse of wall and ceiling glowed, the stereotronic colour scheme today was pale amber, Rand saw without enthusiasm. He queued up at the foremen's counter and took his recessed tray of food.

The break gave him time to think about his father. Family relationships were tenuous things these days and if the Unity Church had its way, as appeared likely, the family as a unit would disappear. What affection could Netta have for a father-in-law who, merely by living, prevented her from having her child?

Rand finished his meal, barely aware of what he had eaten and meticulously cleaned the last scrap from the tray. The illuminated signs around the walls were a part of his childhood and environment.

WASTE IS A MORTAL SIN

WASTE NOT THAT THOU BE NOT WASTED

That was a newish one, Rand realised, and wondered why he never saw the old "Waste not Want not" around these days.

He was sliding his tray into the dispenser when he saw Vicki Martin. Immediately he had the old feeling. He smiled politely and went to move along when something about her face—a too-fixed smile, a hint of insupportable strain round the eyes, or was it just a trick of lighting—made him turn back. Hell, this nonsense had to end one day. He couldn't go on forever running away from his past, from the might-have-been, pretending that he'd forgotten her. The limpid green clarity of her eyes that he remembered so well was missing, they were dull and the skin around them was purplish and shining.

"I should congratulate you, Anton."

"Should you?"

"Well, you're floor foreman now. We'll soon be saying goodbye when you go up to the front office."

He tried to smile at her little joke and fought back the emotion that rushed into his words

"That's very good of you, Vicki." Of course, she wasn't Vicki Martin anymore. She was Vicki Steinway. "How's Jack?" he said carefully.

"He's fine. How's Netta?" Her tone was impersonal as his, too impersonal.

"She's fine."

"I hear you're pre-fighting P.One. I hope you won't be too hard a boss."

"You're working on P.One as well?" He was surprised.

"Didn't you know? Our section is responsible for electronics."

"I'll be seeing more of you, then."

"Yes." She stopped and Rand sensed the deliberate holding back, the withdrawal of confidence. He knew quite definitely that Vicki was in trouble, and wanted to talk to him about it. He pondered the best way of breaking down that barrier and yet leaving her some semblance of self-respect.

"And news of Jack's promotion?" he asked, watching her face, trying to blank out the disturbing impressions that cameo-like and yet impish face aroused in him.

"Nothing, Anton," she said miserably. And then it all came out in a rush like a frozen stream in Spring. "Jack's nowhere near promotion yet. At least another three years—and—Anton, I'm going to have a baby."

"You're what?" Rand couldn't believe. He was profoundly shocked.

"I am. Oh, God, Anton, what am I to do?"

"But you can't," he said stupidly. "State doesn't allow it."

They had moved into a recess, directly under a notice, and the shadowing on Vicki's face hollowed her cheeks and brought her eyes out in staring brilliance. Rand saw with pity that she looked years older. He shook his head and said: "You'll have to tell them and hope for a light sentence."

"I couldn't do that," she whispered. "I want a child badly, so does Jack. We were fools, I know, but —"

"But you've committed a crime against State," Rand said, guiltily aware of the coldness of his words. "What do you expect me to do?"

"I don't really know, Anton. I must have hoped—it doesn't matter. It's no concern of yours."

"Vicki! You know that's not true. Just give me some time. You're asking me to break the law. I've got to think about it."

"I'm sorry, Anton. I shouldn't have involved you in my troubles. But I had to tell somebody, the strain was driving me mad."

"Doesn't Jack know?"

"No. I've been living with this on my mind —"

"All right," Rand said briskly. "Just stop worrying. We'll find a way out." As soon as he had said it he was aghast at the temerity of it. What could he do? Vicki could have her child in secret, he might be able to manage that, even with the routine check-ups, probing and prying. But how could they keep it alive, feed it, integrate it with society?

"You'd help me, knowing you're breaking the law, still, Anton?" Vicki's voice was very soft. Rand cursed deep in his throat and seized her arm.

"I'll help you if I can, Vicki. Just don't go sick and try to avoid a check-up. You've got to keep away from doctors at all costs."

"I've been doing that," she said shakily. She smoothed her hair back and pressed both hands to her temples. "I feel better already, telling someone." She looked at Rand. "But don't get yourself into trouble, Anton. Promise?"

"I'll try," he said grimly. "The police are not lenient with law breakers in the question of food-supply, you know that. They've had enough of unrestricted breeding and food shortages. You were a couple of—oh, well, it's done now. There might be another way out, at that."

"Oh, no, Anton! Not that! Please."

He shrugged. "It's you I'm thinking of. The longer this goes on the worse it is for you. An immediate statement to the police would have cleared you, earned you a light sentence—of course, Jack would have said goodbye to chances of promotion. Then you'd never have children."

"That's what scares me. Jack would be livid."

The hooter sounded and workpeople began to make for the elevators. Vicki straightened her hair and Rand fancied that already some of that strain had gone from her wan face. He hadn't begun to think of what this meant, he could only repeat over and over in his inner mind that Vicki was in trouble, was likely to be dealt with so severely that she'd break under it. The idea frightened him. He took her arm and guided her out of the recess and between the long rows of empty tables. What a fool he'd been not to marry her when he'd had the chance: he stifled that train of thought and concentrated on maintaining some equilibrium as they caught up with the returning workers.

"This P.One scheme is a great idea," Vicki said. There was still a tremble in her voice, a tremble that Rand hoped no-one else would detect. He felt like saying "To hell with P.One, Vicki—my Vicki—what can we do?"

Instead, he said flatly: "A brilliant idea, yes. There should be a good sale for family ships. To see the permitted areas of Mars and Venus, walk upon the Moon's surface, the asteroids—I don't expect P.One will have that range, though."

Beside them an engineer turned his head and Rand saw the disillusioned slant to the thick lips.

"See Mars and Venus? I don't know what the Company think they're doing. They should know State won't allow snooping in the prohibited areas. No-one goes to Mars and Venus these days without dozens of authorisations and —"

"That's enough!" Rand spoke sharply, conscious for the first time of his increased rank. "What the Company do is decided by the front office and will be cleared with State."

The engineer glared at Rand and then walked swiftly off among the flow of workers, quickly disappeared. Rand forgot him, turned back to Vicki.

She had gone. Rand stopped and the workers crowded past him. He stood alone.

Anton Rand sat lumpily in his chair staring at the videophone with the evening sunlight slanting in the tall windows and casting a glimmering net across the floor of his office. He was dreading this call to Netta and unconsciously he took out a packet of selfigs and drew on one. Recollecting where he was he guiltily stubbed it out and returned it to the packet. No use prolonging it any more. He picked up the receiver and asked for his home.

"Private call, Mister Rand?"

"Yes."

There was a pause whilst the operator turned up Rand's card in the files. Then:

"That's quite all right. You have four more calls left this month."

"Thank you."

Rand waited. The videophone panel flushed, then Netta's bright smile came into focus, her face an animated mask. When she saw who was calling the smile faded. She said:

"Well, Anton. What is it for this evening?"

"You weren't in last night when I went to sleep, Netta, so I couldn't tell you about father." Rand's voice was heavier than he thought. He couldn't help contrasting this empty artificial product of beauty salons with the palely worried face of Vicki.

"What about him?"

"Medical gave him three days for —"

"Anton! At last! Well, you can't say it wasn't overdue." Netta was filled with the good citizen's righteousness. "It has to come to us all."

"I suppose so."

"Now, Anton. I don't want any of this stupid old-fashioned nonsense about family love from you again. When the old have reached their time it's best for them to go. I suppose you called to tell me you would be out this evening making arrangements?"

"Yes."

"Well, that's all right, then. I have to see Martha Jorgensen tonight, she has a new sensi-tape from Rio and she says it's really divine. Now don't spend too much money on the funeral, Anton, you know we can't afford it."

"We'll afford what I think proper," Rand said, and this time he meant the overtone of harshness to show. "You may not know what family affection means, Netta; but that doesn't mean that my father's going to a pauper's end." He went on deliberately, ignoring Netta's expression of outraged horror. "And I shall be seeing him every evening right up until the finish. So you can fritter your time and money away with your flashy friends. Oh, yes, there'll be more money to spend soon—I got Neils' job."

Netta's painted face underwent yet another quick-change. "You did, Anton! That's wonderful. I'll go along to the Birth Control Bureau first thing in the morning and tell them our changed status. We should be pretty high on the list."

Rand felt a complete heel at the look in Netta's eyes. He should never have married her, selfish, heartless, typically a modern woman. Yet she wanted a child and who could say how much she would change if she became a mother? The trouble was that he'd been too weak, too prone to let things drift, too spineless ever to make a conscious effort to change the course of his life. Things happened to him instead of happening because of his desires.

"Let's hope it's soon, Netta," he said with genuine feeling. "I might be late. Don't wait up."

"Yes, dear. Now don't forget what I said about spending —"

"I won't. Goodbye." Rand thrust the receiver back with annoyance. Now why did she have to go and spoil it like that? Just when it seemed they were finding some common ground—but no, they had drifted too far apart ever to find their way back. Rand looked round his office, saw that the hands of the clock were straight up and down and thankfully took out a selfig. The smoke did nothing to soothe him.

All afternoon the problem of Vicki had gnawed at him, inextricably in his mind tied up with his father's approaching funeral. They were each opposite ends of life, the beginning and the end, and yet they both bore dreadful fruit from the same dark tree. State knew what it was doing. You couldn't have a balanced ecology without a little friction. He rose and switched off the lights, closed the door quietly and walked down the darkened shop. He squared his shoulders. Now for the undertaker.

"We can do everything quietly, with dignity, nothing to offend, Mister Rand." The undertaker spread candle-white hands above the mahogany desk. He flipped open a photograph album. "With this ceremony you have a full symphony orchestra recording, finishing with solo organ. Very nice. And a first-rate troupe of dancing girls, something to make the congregation remember your father for years. Everything respectable, you understand, nothing that —"

"I don't want the dancing girls," Rand said flatly.

"Oh, the price covers them, Mister Rand. They have a new routine —"

"I don't want dancing girls."

"But they're in the price." The undertaker was baffled.

"Look, I'll pay you the full sum. But I don't want a gang of half-naked posturing girls dancing round my father."

"Mister Rand! My girls are the most efficient, decent, respectable

girls! I don't allow any of the goings on that occur at some funerals."

"I don't doubt it," Rand fumed. "Just take them right out of the service. And get a preacher who sounds sincere. I don't want any of your whining bums making a mockery of my father's funeral."

The undertaker was insulted. Rand could see that from the way he drew his chin down inside his collar.

"Very well, Mister Rand. I think I understand. If you'll just sign here . . ."

Rand walked out of the undertaker's parlour sick of the hollowness of life. State knew he was a good citizen. But sometimes, when things happened that could not be explained away by his forebrain his thalamus took over, against all reason, and messed him up inside until he couldn't tell white from black. The journey to Widdower's Row did not take him long; but when he stood outside his father's door he couldn't remember a single incident since leaving the funeral parlour.

Corbon Rand was entertaining. Sitting chuckling in the chair an old, decrepit wisp of a man with a defiant white cockscomb of hair put down a glass and started with needle-sharp eyes at Rand.

"More company for you, Corbon. Come on in, boy, and sup some of this purple death."

Rand shut the door behind him, looking questioningly at his father. Corbon Rand's face was flushed, the blood mantling his cheeks under the thin parchment skin. He waved towards the bed and the glass in his hand sloped.

"Sit ye down, boy. Ben Addams here is helping me spend my last days in a little celebration." Corbon Rand drank and smiled brightly at his son.

Rand sat down beside his father, refused a drink and lit up with a single drag a much needed selfig. There was something—a tenseness, a sense of oppression—in the small room that made him feel uneasy. His father rarely drank, and never to excess.

"I made all the arrangements," he said abruptly. "Everything nice and quiet."

"Good, Anton. Good." Corbon Rand did not appear to have understood fully what Rand had said. His eyes shone. Ben Addams hiccohed and finished his drink.

"Damn bunch of barbarians," he said fiercely, startling Rand.

"Who are?" queried Rand.

"Why," Addams gestured widely. "They are. All those mean lot of so-and-sos who kill us off when we get a little unsteady on our pins." He poured more liquor. "Good stuff, this," he went on confidentially.

"They can't replace me yet. Brew the beer, I do, and machines haven't been invented yet that can judge what the malt and the hops'll do by the time the beer runs from the barrels. Serve 'em right. When I'm dead lettem see how they get on with their damn machines then."

Rand remained silent.

"I'm a symbol, that's what I am." Addams wiped his hand across his mouth. "A mouldering left-over from a chaotic age—at least, that's what the boss said the other day. And now they're taking my old pal Corbon away. It's not right." He stood up suddenly, spilling the glass to the floor. "It's all wrong! You shouldn't have to kill off the old people."

Corbon Rand nodded in agreement, and Rand saw now that his father was quite sober. Some other emotion had taken the life from him, made him listless and dull of expression, turned him into a man Rand did not recognise as the father he knew.

Corbon said: "It's no use talking like that, Ben. If I'm to die, then I'll die. Our way of looking at things is outdated and wrong, they've proved we're wrong." He looked up quickly at Rand. "We are wrong, aren't we, son?"

Rand moistened his lips. He was sweating.

"Yes, father," he said hoarsely. "You're wrong."

The old man crumpled back on the bed. "Y'see, Ben. Even my own son thinks like State does."

Addams opened his mouth to reply. A sharp rap on the door cut him off and then Rand's sister Ava and a dapper, slickly-groomed young man came into the small room.

There was much hubbub and then they sorted themselves out with Ava in the chair, the two old men and Rand on the bed and the glamour boy standing awkwardly beside Ava. She introduced him as Noel Costain from Hydroponics and then obviously forgot him in a flurry of cross-talk that left Rand with the impression that something had upset Ava to such an extent that she was near hysteria.

"Why didn't you tell me before, father?" she said reproachfully. "And you could have contacted me, Anton. After all, I'm only a year younger than you, and quite capable of looking after myself."

The Rand menfolk apologised. Rand understood himself well enough to know that the worry heaped on him the last day or two was more than cause for forgetting.

"You never did get to State Polytechnic, Ava," Corbon Rand said slowly. "And you're inclined to view things in a different light from most of the modern generation. Don't make it harder for me."

Rand realised with a profound shock that Ava had been talking and displaying convictions that he had never dreamed she possessed. He glanced keenly at her, at the mobile lips and tear-bright eyes and realised that this was a sister new to him. Her current boy friend appeared distressed at the turn of conversation.

Ava was saying: "But it's not right for you to go yet, father. There's your music, your concerto, State can't afford to lose that."

"I can't work in the accepted sense of work," Corbon said quietly. "You must produce to earn your right to live."

"That's true, sir." Costain was speaking now, quite obviously, Rand saw with some amusement, trying to hold onto some shreds of sanity in what must appear to him to be a hot-bed of sedition.

"Music doesn't fill stomachs," Rand said brutally.

"Anton!" Ava twisted to look at him, her face white with strain. "That was unforgivable."

"All right," Rand said easily, drawing on his cigarette. "Just wanted to find out how you stood. You want to keep father alive because of his music—that's your reasoning logic to explain your instincts. You're trying to find some special reason why our father should be excepted from the laws you're quite happy to see other fathers obeying. Whatever the reason, you'd see other people starve if it meant that father stayed alive."

"I know I'm wrong," Ava said, her eyes fastened on Rand with an almost hypnotic intensity. "But, yes, I would. And I'm a fool for expecting you to see it. You're too much an automaton of State —"

"All right, Ava," Rand said, quite quietly, and yet his even tones silenced his sister immediately. Rand felt warm in the tiny room; it had never been built to hold five people, and he pulled himself off the bed and stepped up the ventilator input. As he turned back, the dapper Costain, smoothing his thin moustache with one white hand, broke into the conversation.

"You told me you had to see your father, Ava, and I tagged along. I didn't expect to listen to this sort of trashy nonsense, this spurious humanism, this coldly calculated appraisal of your chances of breaking the law."

"That's quite a mouthful, son," old Ben Addams hiccoughed unexpectedly from the bed. He sat up and pointed at Costain. "You tell he how you'll feel when they ask you to make your funeral arrangements."

"I hadn't thought about it."

"Course you hadn't." Addams flushed in triumph. "Your mind's

been washed by State. Well, son, just think about it now."

"This is getting nowhere, fast," Costain said coldly. "I think we should be getting along, Ava."

Addams hopped off the bed. "Hold it, youngster. You don't want to think about it, you're frightened to, I know that. State —"

"State knows quite well what it is about," Costain interrupted, breathing heavily. "Out of consideration for Ava I'll say nothing of what I've heard here to-night. You're the sort of people who would relish seeing the streets filled with cripples, and people in pain lying sweating for death in hospital beds."

Addams used a word for which he immediately apologised to Ava. "That's your side of the story," he said, his slight frame taut against the slim vigour of Costain.

"I pay taxes, heavy taxes," Costain said viciously. "If you had your selfish way you'd live on an old age pension and bleed me white supporting you. Look what happened at the end of the twentieth century! Millions of old people riding like incubi on the backs of their children, sitting around moaning about their small pensions and the cost of living, when the youngsters were sweating out their guts earning the money to keep the old in comfort doing nothing. No wonder State took over and organised things on a fair basis. No work, no food! As simple as that."

"If it takes the young to support the old then," Rand broke in harshly, "why does State enforce birth control?"

"Otherwise the ignorant and low intelligence masses would breed like rabbits, and the intellectuals would gradually decline. For a husband and wife to keep up a reasonable standard of living and to support a great squirming family of brats at the same time is impossible. One child, at the most two, and their economic resources are fully occupied giving that child a good education and clothing and feeding it decently. The ignorant don't care—or didn't until State stepped in and organised the way the new generations grow up."

The devil of it was, Rand knew, that was true. And poor, silly Vicki had got herself entangled with the juggernaut of State control. She was up against the mass opinion of millions of Noel Costains. His attention was taken by old Ben Addams who flopped back on the bed and began to drink from the bottle. Rand watched him. The oldster had no answer to that. His emotions clouded his judgement, true, but the old man had no emotional weapons to counterattack accusations of mass breeding of morons. Birth control was an essential part of State doctrine, the planned beginning of a cycle that would end with the mute acceptance of the order to prepare your own funeral.

"Logically, all that is true." Rand's words were forced from him like juice from a crushed lemon, and as bitter. "But when it's someone you—someone you love—the picture takes on a different aspect."

"Come on, Ava," Costain said roughly, moving over to the door. "Let's get out of here before things are said that we'll be sorry for."

Ava remained sitting. "You go along, Noel," she said. "I want to say goodbye to my father."

"But, Ava —"

"I don't think I would be good company, not just now. I know your attitude is right, according to State. So just leave me alone." She stood up and went over to Corbon Rand, put an arm around his shoulders. "Just leave me alone."

Noel Costain began to open the door, but stopped as Ben Addams shouted from the bed.

"You think State knows all the answers, don't you? Well, you're all wrong, do you hear, all wrong!" He was breathing loudly and his white hair was a wind-blown snowcap. "They ought to prevent this mass-breeding of morons you talk about by teaching people not to be morons. They didn't ought to interfere with people having children. It's not natural. Folk's'd learn in time."

Costain laughed.

"In time? Before the deluded fools learned they'd all be dead from hunger, like the rabbits who multiplied and ate their island bare. It's natural, you say. It's natural to have large families and it's natural to squander food and lay waste to fertile ground. What you need is a stiff dose of State science and ecology-eugenics, then perhaps you'd face reality as it is, and not life as you think it ought to be lived." He looked round the room, at the four taut faces. "All right, don't worry. I won't squeal on you. But I would advise you to forget any stupid ideas you might have of breaking the law."

"Well, thanks son," old Ben said, and belched.

Costain snorted contemptuously, and stalked out.

Ava burst into tears and flung herself into her father's arms. Rand looked at Ben's bottle, took it and swallowed a great draught that burnt his throat. He began to wish that he had been one of those who hadn't been born.

Rand was asleep when Netta came home and she was still in bed when he left for the yards. He had to make a conscious effort to remember to head straight for his new office—Neils' old one—instead of donning his overalls before his machine. He felt lousy, and the sleeping

pills he had taken the night before still made him see double images. At least—he was blaming it on the pills. His head felt as though State were feeding it through a cyb machine.

Data on P.One danced erratically on the page on his desk and he was glad to get out again into fresh air on an inspection tour.

P.One sat shily on her fins in the yards, panels reflecting the sunshine into his eyes and filling them with water. He looked more carefully at the new ship than he had ever done before, noticing just what was necessary to tie up the equipment for which his section was responsible, and wondering if Vicki would show up this morning. By the time the mid-day break came round he knew a great deal more about the ship than he had; but Vicki had not appeared.

He rode the passenger elevator down to the canteen and collected his food, finding a table out of the general hubbub and noise. Even then, but for the two strange girls who sat at the table for a confidential chat, he might have missed it. The thought of that made sweat run down his face. He listened slackly as the girls prattled on, and a knob of ice formed in his stomach and spread until his brain was locked in its grip and stupid little thoughts ran as aimlessly as snow scurries round the pole.

"... serves her right. Who does she think she is, anyway?"

"But, my dear, fancy trying to hide it! After all, the doctors aren't idiots. And coming to work as bold as brass! Really, I don't think she could have had a conscience."

"Still, they don't get away with it."

"More fool her for being a criminal. Her husband had a good job, hadn't he? Silly little fool, although mind you, I've no sympathy with those sort. The police ought to be more strict with offenders, then perhaps we'd get more to eat."

"I can't imagine how she must have felt—having the police come in right in the middle of check-up."

"Serves her right."

Rand moved stiffly along the bench and at the slight noise the two chattering girls looked at him, their faces went red and they giggled. Rand's face was set, feeling as though a coating of ice held it immovable. That ice cracked and shards split into words.

"Who—who is this, please?" he asked.

"Haven't you heard? Some hussy in electronics. Having a baby without a licence. A shocking thing."

"Shocking," agreed Rand, feeling numb. "But who?"

"Mrs Steinway —" The girl's eyes narrowed. "Is anything the matter?"

"No. Nothing. Excuse me please." Rand rose and walked away blindly.

"Vicki, Vicki Vicki. You poor, sweet, helpless fool. So you couldn't avoid a check-up, after all. And it's all come out and I shan't see you again." The words etched themselves in his head. He went out of the canteen, up in the elevators and shut the door of his office quietly.

After a time he roused himself and drank some water.

Then he thought about his father. Going from his office, he walked along to Slattery's office, knocked and went in. Slattery was smoking, his florid face puckered over plans.

"Oh, Rand. Just the man I wanted to see. Here, P.One is perfect, on paper. But there's a little snag—what's the matter, man? You look ghastly."

"Can I have the afternoon off, sir?"

"What? Hell, no! There's too much work to do on pre-fighting P.One. That ship has got to be finished by to-morrow, Rand!" Rand saw that Slattery's eyes, cod-pale in the florid face, were sharp and shrewd and full of suspicion. "Are you ill?"

"No—that is—I—"

"What's the trouble, Rand? Why not tell me. Perhaps I can help you."

"I don't think so, sir. It's very good of you; but it's just a personal matter —"

Slattery picked up his yellow pencil and jabbed it in sharp lunges at his desk. He did not look at Rand.

"Hear your father's preparing his funeral, Rand."

"Yes, sir."

"Well, I'm sorry to hear it, but that's how it is. Something that comes to us all in State's good time."

Rand had difficulty in convincing himself that he was here, feet planted firmly in the Works Managers' pile rug, talking about the central facts of life with an almost casual air as though they were not affecting every moment of his day and night; almost as though, it seemed to him, he was talking about some stranger. He caught again that distinct impression that Slattery was weighing every word he spoke, picking the right meaning he wanted to convey, and that Rand's mind was obstinately refusing to open and receive the hidden information. Whatever was the matter with Slattery, Rand had too many troubles of his own to waste time investigating. He licked his lips and flogged himself into changing the subject.

"You wanted to talk to me about P.One, sir?"

Slattery looked disappointed. He threw the pencil down, rose, and walked over to the windows. "Yes, Rand. Only a minor snag, nothing to worry us unduly; but it may mean your working overtime. We must have that ship finished."

"Very good, sir. If I can have this evening free —"

"Of course. Tomorrow is our last day, you may have to work on into the night. Just make sure that your section complete their part." Slattery swung round from the window. "Oh, and Rand. If you run into trouble, any trouble at all, come and see me. I'll help you out."

"I'll do that, sir."

"Right. Now get to hell outta here and flog that lazy bunch of workmen into producing results."

Rand got. He had decided at once to give up the first crazy idea he'd had of rushing out there and then in blind reaction to the dictates of Slattery. And, anyway, evening was the best time for what he meant to do. Nothing, now, could be done about poor Vicki. He had failed her, completely and miserably. But the same remorseless and inhuman machine which had ruined her was not to have the same success with his father. Waiting for six o'clock, Rand performed his work like a robot, thinking, planning and working himself up into a simmering mass of anger.

He could see, quite plainly against the blank office wall, a hundred flashing recollections of his father. Of the old man bringing home Rand's first fishing rod and how they sat in timeless warming talk by the river. They never did get a bite that day, Rand remembered. Of the violin and the concerto that would make them famous. Of Martians and Terrans, scuffling down the stairs in the old house, water-pistols ablaze until mother came out with a mop and chased them both, helpless with laughter, into the garden. The old man had been fun. Rand regretted the blank years after he was married and mother died and his father had played his violin in Widdow's Row. He had the sort of regret that was hollowly useless, that could bring back nothing, that could change nothing: except, perhaps, his final actions for the future. Always, look forward, the past is there, unchangeable, a fixture of the mind that only death or psychosomatic amnesia can eradicate.

Rand wasn't dead—and he had no wish to forget.

He began thinking of all the people he knew at all well, sorting them into two categories: those he had no hope whatever would help and those who, because of some trifling remark, some idiosyncratic attitude, might offer to aid him. The normals mounted rapidly on his mental discard pile whilst the helpers remained discouragingly small. The trouble was,

he acknowledged ruefully at last, he didn't know any criminals.

Sharp on six o'clock he closed the office door behind him without bothering to ring Netta and hailed a gyrocab. If anyone could help of the people he knew, Dirk Shulan was the man. Strange how now, with these new thoughts in his head, Rand could see his acquaintances and friends in an altogether fresh light, from a radically opposite viewpoint to the polite, vacuous and superficial outlook of his whole previous life. He was still wondering about that when he visored his identity into Shulan's place.

Shulan, large and smiling, welcomed him, a little puzzled, Rand guessed, by this unexpected call. Shulan had been a friend in the past, neglected of late, and Rand had a tight feeling of non-contact as he told him briefly of his father's approaching funeral. He finished by saying, simply: "I want to get Dad away to Mars, or Venus. I know they need men there. State keeps the colonies deliberately under-populated I hear for fear of secession. You'd know more about that."

Shulan's big face sagged and lines of worry creased round his eyes.

"I'm sorry to hear about your father, Anton. And the colonies do need men, badly. State keeps a very tight hold on them, I can tell you, it's an open secret." He pulled out a packet of selfigs and spilled them on the floor as his fingers jerked. "But you're asking the impossible, Anton. I'll overlook your declared intention of committing a criminal act—State knows I've no love of the present set-up—but you'll never get away with it."

"All I want to do is to smuggle us aboard a ship for Mars or Venus. You can do that, Dirk, I know."

"You'd go as well?"

Rand shrugged. "I could come back." He knew that was a gesture. "What else can I do?"

"I don't know. I can't afford to get mixed up in anything like this, Anton. Surely you realise that?" Shulan paused and eyed Rand. Then he said abruptly: "I can only suggest you see Whatman Stokes. But your father has no right to hold onto life after he has finished with it. You're doing no-one any good —"

Rand walked out, stony-faced, the beginnings of despair gnawing at him.

He glanced at his watch and decided to take a gyrocab to Widower's Row. He walked along the dismal corridor past his father's door and knocked on the door with the card reading: "Ben Addams." There was a delay and then the door opened an inch and Addams' bright eyes stared suspiciously at Rand, saw who was calling, and the

door was opened all the way.

"Gotta be careful, son. The snoops are always around and I brought back—anyway, don't stand there. Come in." Rand went inside and Addams shut the door and slid the bolt.

"Forgive me if I'm intruding," he said. "But I must talk to you about my father."

Addams flopped on his untidy bed. Rand noticed that the white cockscomb of hair lay limp on the old man's head; but the eyes were as needle-sharp and shrewd as ever. Addams brought out the inevitable bottle, which Rand waved away.

"Well, what do you want to talk about?" Addams shrugged and drank noisily.

"I know how you feel about my father," Rand began cautiously. "I feel indebted to you for cheering him up —"

"Come to the point, son," Addams said, not unkindly.

Rand swallowed. "Well—I want to get him away to Mars, or Venus. I thought you could help."

"Why me?"

Rand smiled thinly. He didn't miss the fact that old Ben Addams made no disclaimer, made no attempt to avoid offering help. There was something about this calm acceptance of unlawfulness that both strengthened and repelled Rand. The ways of the underworld were completely strange to him; he would just have to learn them in a hurry.

"You work at the brewery. But you are also in a position to obtain bootlegged drink and I feel sure that means you have contacts with—well, let's say less inhibited people than I."

Addams chuckled. "Let's say that, sure, son." His face grew grave. "But that's an almighty big order. Getting old Corbon aboard a ship to the planets. One hell of a big order. I don't rightly know that I could help."

Rand felt the familiar sensations of despair that he had experienced when Dirk Shulan had turned him down. These little people talked big. But when it came to the pinch of disobeying State, of breaking the laws against which they railed, why, then it was a different story. The ball of ice that had encased his mind and emotions ever since he had heard about Vicki, was being melted piece by piece, gradually being frozen out by the lukewarm loyalties of people he had perhaps hoped too much from. This opposition only strengthened his resolve to save his father: it had taken a long while to build up, painfully accruing, and distorting his sense of values so that now he was set on breaking the law. Once he had taken that decision and faced all that it involved he was not going

to discard his new-found resolution and abandon his stand. He glared at Addams.

"So you can't help, either! After all you said last night, and your argument with that puppy Costain, I had hoped you might be able to help."

"Whoa, son." Addams looked injured. "I didn't say I wouldn't help you, just that it was mighty difficult. I, personally, cannot help you at all." He chuckled, and the chuckle turned into a wheezing cough. He wiped his mouth. "But I can put you onto someone who can help you."

Rand felt a tremendous weight rise from his depression and his spirits soared. He gripped Addams' arm. "Who? Where is he? What—"

"Hold it!" Addams barked the words. His eyes narrowed. "Now just take it easy. We'll work this out between us all right. But you've gotta keep your head. State knows the situation's bad enough, without hysterical blowups to complicate matters."

"I'm sorry."

"Right. Now, I know a man who is what you would call a crook. He takes a fair amount of my bootleg liquor, and dabbles in other things on the side. I'm not in such a big way of business that he owes me much; but he'd do me a favour if he could. You go and see him, tell him I sent you and what you want." Addams picked up the bottle again. "If he can't help you, nobody can."

"Where do I find him?"

"He runs the 'Mercury Arms'. State has it listed as a night-club. I'll leave you to fill in other things that happen. Oh, and take it easy when you get in there. Don't go shooting your mouth off to everybody. The underworld are touchy. Ask for Whatman Stokes."

"Whatman Stokes! But I was already told to see a man called that. It didn't mean a thing to me."

Addams grinned. "Whoever told you was trying to help, evidently he was too scared to open up."

Rand dismissed that. He stood up and smiled at Addams, feeling better than he had for two days.

"Thanks a lot, Ben. I won't forget."

"After you've introduced yourself to Stokes, just forget you know me. I want to live to a ripe old age, if State will let me."

"They can't do without you, Ben. Beer just wouldn't be the same."

"You're right, at that," Addams grunted and went back to his bottle.

There was no answer to Rands' knock on his father's door. He stood in the chill corridor, waiting, planning his next moves. First, to

tell the old man, reassure him that, State or no, he needn't walk through the purple archway. Second, see Whatman Stokes, tonight at the latest, and arrange a passage. Things were shaping up. Rand knocked again, then pushed the door open. He went inside.

His father was lying head first from the bed, one limp hand trailing the violin onto the floor, blue-faced, breathing in wheezing, choking gasps that sounded like an animal in a trap. Rand rushed across the room, pulled his father back on the bed and cursed deep in his throat.

A heart attack. This upset his plans completely and as he stood looking down at his father bitterness welled up in him. It looked as though State was going to have it all its own way.

The two policemen looked challengingly at Rand who preferred to return their gaze rather than betray his intense interest in Slattery's office clock. This questioning had started at half-past four, it must be at least five by now. Another hour and then he could escape from the octopus-like grip of the yards and carry through his plan. His plan! It seemed very pathetic and flimsy before the lawful might of these policemen.

"May I ask you, Mister Rand, why you did not attend your father's funeral?"

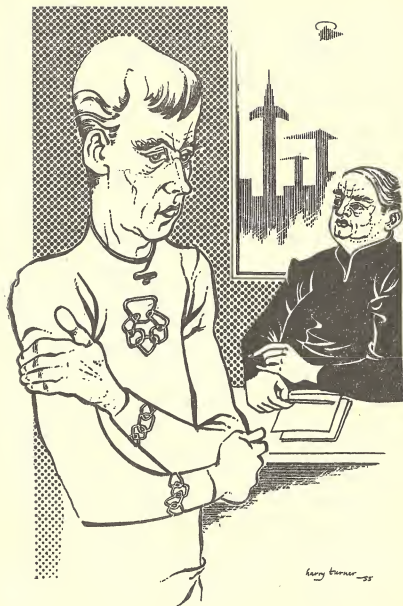
"We're very busy here," Rand replied brusquely. "Mister Slattery can verify that. We have a job that must be finished by tonight. I just couldn't spare the time."

Slattery waggled his yellow pencil. "That's right, officers. We're producing a family runabout that will revolutionise space travel —"

"Yes, yes." The policeman brushed that aside irritably. "I've heard about it. I'd like to own one myself, if police pay ran to that kind of luxury. Now, Mister Rand, you were seen going into your father's block on Widdower's Row last night. Since that time your father has not been seen. I'll ask you again, for the last time, do you know where he is?"

"I can only repeat, I don't know," Rand lied. He found deception surprisingly easy when it was a simple piece of a larger design. Old Ben Addams, summoned by the frantic Rand had come into Corbon's room, taken over. Ava had been summoned. They'd smuggled the old man out, insensible, and hidden him in Ava's room. How long before the police found him there Rand didn't like to guess. He only hoped that he'd be safe until this evening.

Rand had been forced to go into work today—if he'd stayed out the police would have realised at once that they had something more serious on their hands than one old man trying to avoid his death. Rand remained self-possessed and, to his own amazement, detached from all this,



as though he were viewing it on a tape. He'd committed himself, now he meant to carry out his plans without any further recriminations or wishful thinking.

The policemen left. Slattery looked quizzically at Rand.

"You'll be working on tonight, Rand?"

"Yes, sir."

"I thought you might have—other ideas."

"I don't understand, sir. P.One has to be finished —"

"All right, Rand. I'm not going to repeat what I said before about coming to me if you need help. Just remember it, that's all."

"I will, Mister Slattery."

Rand left Slattery's office and dismissed the man from his mind. As soon as the six o'clock hooter blew he'd go out with the mass of workers and he wouldn't be coming back. P.One was ready, in any case, a shining spindle standing in the blast area alongside the river waiting for the buyers to examine her in the morning. All he was needed for was a final routine check and the ship was already one hundred percent. Characteristically, Rand was pleased. Even in his present predicament he had no wish to let down the old firm.

Sharp on six o'clock he left his office with the lights still burning and went briskly out of the yards, mingling with the thousands of workers homeward bound. He went straight to Ava's place. He remembered to watch out for anyone following him, rather self-consciously scanning the shadows around her block and feeling foolish when he saw no-one remotely resembling a policeman. Ava greeted him in a subdued mood, her young face worried.

"How is he?"

"Oh, father's all right now, Anton. But it was a nasty turn and I'm worried."

"Well, let's not waste time." Rand gnawed his lip. "The police were questioning me today, so I don't want to attract their attention by too much running around, especially as I'm supposed to be working this evening. Father had better come with me now."

"All right, Anton. If you say so."

The radio was distilling sweet music which faded as they entered the living room. Corbon was sitting, white-faced and drooping, in a chair, his hands loosely hanging between his knees. He smiled at Rand. The radio bongged and an announcer said with pseudo excitement:

"The latest ag-pop ratio is to hand, ladies and gentlemen. State is happy to announce that the new figure is two point two five seven, an advance of point oh one six on last month's figures. This is indeed a

great achievement and all praise is given to State for its wise government."

Corbon Rand grunted without moving.

"Every human being on this planet needs two point five acres of land to feed and clothe him," he said heavily. "With all their hydroponics and under-sea farms State can't raise that figure. It's a rat-race, and starvation looks like winning."

"That's better than the middle of the twentieth century," Rand said automatically. "They were living on one point eight acres per head then."

The announcer went on: "Now here is a police message. Will anyone who has information on the whereabouts of Corbon Rand please inform the police at once. Vital statistics as follows: "Height—"

Ava slammed the radio off and twisted to stare sickly at Rand.

"What are we to do, Anton? We've got everyone —"

"Now take it easy," Rand snapped. "Father and I are leaving at once. If the police question you—and they will, you can be sure—you just don't know anything. Did you go along to the funeral today?"

"Yes. I went," Ava whispered. "It was horrible. We just waited around and then people began to talk and say things —" She lifted her head defiantly. "But I don't care. It wasn't *their* father they'd come to say goodbye to."

"As soon as we reach Mars, or wherever we make planefall," Rand said quickly, "we'll send a cable. Just a simple, matter-of-fact thing: but you'll know that we made it safely."

"I'll be waiting, Anton."

They went out the back way. Rand peered from the doorway, made sure that everything was quiet, and this time there was no self-consciousness about it. He knew now how a hunted criminal feels. That terrible sense of tightness, that there is nowhere to turn, that every man's hand is against you. His lips were bloodless, pressed together, and his face felt shiny and stretched as though the skin had shrunk.

He held on to his father's arm and they went straight away from the blind, blank concrete buildings where Ava lived, without deviating, walking quickly and yet unhurriedly, as though they had just enough time to reach an appointment. The air felt cold on Rand's face.

"You don't have to do this, you know, son."

"But I do, Dad. State knows, I do."

"I was resigned to my end —"

"Were you? I don't think you were. I've been thinking about that over these past couple of days and I know that I couldn't face my own

end in just the same way that I would have done before. But you, you're one of the old left-overs, a pre-State indoctrinated persons and for you the idea of death —"

Corbon Rand smiled slightly, his leathery cheeks wrinkling.

"Now you've gone off half-cocked, son. If it isn't all white for you it must be all black. Sure, none of the left-overs fancies death. But there can come a time when it appears quite normal, even something you desire."

"Like a man at the end of torture?"

"Something like that. I'm at the end of something, too, Anton. Not as dramatic as torture; but certainly no less destroying."

"Look at Ava, at her reaction —"

"Ava's reactions are simple, Anton. There's no deeply hidden motives there. She hasn't been as fully State indoctrinated as some, and her desire not to see me die easily overcame what little training she had. Bless her, poor girl. She needs sympathy, you know, Anton. For the future."

"I know."

They rounded a corner and headed for the bright-lights end of town, walking rather than risk a gyrocab. Corbon Rand appeared sunk in thought. He said, suddenly, as thought it had to come out: "I'm to blame for Ava. If I hadn't insisted that she stayed at home instead of going on to extra-curriculum studies at the Poly with Netta she'd be far happier now." Corbon drew a quick breath. "But, your mother needed help, Anton, you know that. I'm surprised State allowed it."

"Take your time, Dad," Rand said, worried by his father's quick gasping for breath. Then, carrying on as though the interlude had not occurred: "State knew that one single girl couldn't affect a great deal, they were far more lax in the early days than they are now. Just a matter of strengthening their grip. But, for all their totalitarian methods, they're still right. We're the wrong doers."

Rand stopped, jerked back to his present problem as his father gasped and stumbled, clung weakly to Rand.

"Dad—you all right?"

"Sure, son. Just a twinge. And my legs feel rubbery, as though I don't own them any more."

"Oh dammit." Rand glared around and hailed a gyrocab. They'd have to chance it, that was their only alternative. The gyrocab span its vanes, hauling them smoothly along the city centre, sweeping in the hundred-fifty miles an hour level over Central Square. Below them and on either side brilliant light transformed the heart of the city into a

pageant of noon-day. Thousands of people pushed and jostled along the pavements and fly-overs were carried in speeding vehicles through the airlines, all frantically seeking an evening's entertainment in this vast honeycomb of artificial life. The two Rands sat, silent, staring ahead, their faces, so much alike, set into hard planes and shadows of tense expectancy.

The gyrocab came down on the roof of the 'Mercury Arms' and Rand dialled the 'Wait and Charge' command. Now they'd taken a gyrocab they might as well retain it and prevent it relaying information to police headquarters as soon as they were finished. Corbon Rand's face was an unhealthy putty colour. He shook his head at Rand.

"You can still back out, son. Don't worry about me any more, I'll —"

"Shut up, Dad! D'you hear?" He guided his father towards the lift. "We're committed to this thing now. Whatman Stokes just has to help us."

"I wonder."

"He's got to!"

They found Whatman Stokes in the gaming salon, watching the fungi-battle. The low room was a seething swirl of men and women with flushed faces and glittering eyes, who shouted and roared encouragement to the fighting fungi of their choice. Smoke coiled acridly. The Rands waited tensely at the bar until the victorious fungi had converted the plastic globes into a hell of its own creation. Then Stokes pushed through the mob and Rand nodded to him.

"Ben Addams sent us."

Stokes looked pointedly at the empty polished wood of the counter and Rand ordered quickly. With his glass rolling between white hands, Stokes eyed them with bright beady, suspicious eyes.

"What do you want? Forged food coupons?"

"No. A passage to Mars, or Venus."

"Is that all!" Stokes sipped his drink contemptuously. "My boys can fix most things, but what you're asking is murder, pure and simple."

"That's what we're trying to avoid." Rand spoke sharply, conscious of time running out. "Listen, Stokes, we have to get to one of the planets. And we have to get out of the city tonight. Can you do it?"

"It'll cost you money."

"I can pay."

"You realise what you're asking? Forged papers, medical, eugenics, psycho, a hiding place, either a murder or a kidnapping to create a vacancy. And with the police on your tail . . . Yes, it'll cost you money

all right, Mister Rand."

"How did you—oh, the radio." Rand cursed. "All right. How much?"

"Ten thousand."

"Ten—thousand! But, man that's impossible."

"That's my price. Take it or leave it. And, to be brutally frank, I'd rather you left it."

Stokes glanced over the room, a casual-seeming yet all-embracing survey. He motioned and led the way towards a back room.

"Come out of the limelight. Even though those suckers in there are so gone they can't tell a killer Venusian Red-Spot from a tame Earth mould with a shot of cochineal and dope some fool might recognise you." He closed the door. "Now, ten thousand or nothing. That's final."

"I've nothing like that," Rand protested. He felt sick. "How much for taking just my father, alone—"

"Still ten."

"It's no use, Anton," Corbon said emptily.

"Can you pay or can't you?" Stokes finished his drink and the glass made an ominously final noise on the table. "If you can't, don't waste my time."

"I haven't anything like that money." Rand felt confused, alone, the noise of the gambling crowd outside somehow mixed up his head like the beating of some great internal sea. "Come on, father."

They left by another lift, walking over the roof in despondent silence. So this was what criminals experienced! This was the price of disobeying State. What could he do now? He felt drained of energy, this last reverse had taken away his will, and, it appeared starkly obvious that there was no one else from whom they could expect hope.

Stoke's final words rang mockingly in his head. "Care to win the money out there." with a derisive gesture to the room where fungi battled in plastic globes. Rand had glimpsed from Stokes' casual remark just how much chance he had of winning money there. He stared at the gyrocab. If only he hadn't broken the law, had been content to allow life to go on along its predestined course, he would be happily working on P.One, secure in the knowledge that he had gained promotion. Netta would have her baby, they'd move into bigger and better quarters. He'd possibly buy a helicar— P.One!

Of course. The answer was there, standing shining and waiting, in the Thames yards. He grasped his father's arm, bundled him into the gyrocab and dialled for the yards.

"What now, Anton?" His father was listless, uninterested. Rand

wanted to urge more speed from the cab, to get there, to blast away in P.One, spurn this world under his heels.

"Our last chance, father. Our last hope."

Netta would be wondering why he hadn't rung her by now. Netta. He felt a twinge of remorse for her, shallow, painted selfish. He knew well enough that she didn't care who fathered her child so long as she had one. She bore him a grudge that he hadn't a better job, hadn't been in a position to live in more luxurious style. But most of all, because he wasn't high enough up in the State promotion ladder to father her child.

"I can simply walk into the yards, Dad. We'll go straight to P.One—that's the new space runabout—she's all ready for the demonstration flights tomorrow. We'll go to Mars on our own power—or Venus. Would you prefer Venus?" He was speaking as much for his own benefit as his father's. It might not be as easy as all that; but he felt supremely confident that it could be done. Outside, the night fled past with a streaking of lights as the city fell away and the Thames yards with their miles of works loomed up. Yes, he could get in easily, explain his father by saying he was a new tech, and then they could decide which planet it was to be.

They could even try both, and take their pick.

The gyrocab dipped. The yards slid up, enfolded them, swung and steadied and then the gyro came to a standstill. There was a light-headed feeling about Rand as he climbed out. He helped his father down and then, as if to show how efficient at this crook business he could be, he punched the "Wait and Charge" and smiled, a little shakily. The cab would wait a long while.

He got through the main gate without trouble. The high mesh receded behind them as they walked, trying to appear casual, down the long incline to the Thames test area. P.One, a silver moth caught and pinned by billions of candle-power, stood straight and tall before them, like a pointing finger.

"There she is, Dad."

His father tried to smile, but his face contorted instead into a grimace of pain. One thin hand pressed his side.

"Dad! Come on, now. We're nearly there."

"I'm right with you, son. Just a pain—"

Rand put one arm round his father's waist and half dragged him along. They couldn't fail now, not with P.One standing there proud and waiting before them. They struggled towards the ship, leaving the concealing shadows, going out across the apron where a few late workers moved slowly.

"I—I can't make it, son. Go—Go—"

Corbon Rand slumped limply in Rand's arms. He looked down at the face, seeing for the first time the ravages of time in the sunken cheeks, sagging pouches of blue-green flesh under the eyes, the thin stubble on the scrawny chin and neck. His father was old. Too old to work, State said.

State was right.

All manner of thoughts crowded through Rand's head. Netta. And Ava, her tear stained face pleading. Not fully comprehending what she was pleading for. Surely, not this, this pitiful husk of a man, limp and gasping in Rand's arms. And Vicki. Poor, stupid, Vicki. She had by now found that State was right, that what State said State meant.

Corbon Rand slipped from his arms, lay asprawl and lax on the concrete. The stertorous breathing fluttered, the face was ghastly, frightening. Rand, standing numbly over his father watched him die. Heard the last struggle for breath, the last rattling sussuration.

He looked up. up to where P.One stood, aloof and shining, disinterested, utterly unreal. A shadow came between him and the glistening spire.

Slatterly said: "I told you to come to me for help, Rand. Now it's too late."

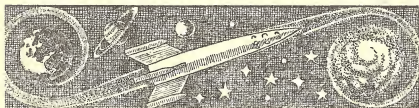
Behind Slattery, coming from the shadows, two policemen. They walked towards Rand, standing there by his father's body. He could have run for P.One, got aboard, taken off. He could have, easily.

He just stood there, waiting.

The policemen walked towards him. They were calm, unhurried, quite without emotion. They were just servants of State, doing their job, protecting citizens from criminals.

Anton Rand stood watching them come for him.

KENNETH BULMER



Universe Times Two

A scientific article in which a popular contributor to a large number of science magazines gives us a glimpse of the exploration of space which is going on day by day in the observatories of the world

Man is gaining his knowledge of the universe like a young child growing up in a society filled with strange laws and customs. He has to learn by a process of trial and error, recognising patterns of data and building them into his scheme of understanding. Often there are errors in the data and he has to check back to correct them but, by doing so, he opens the door to new knowledge.

Astronomers, during the last few years, have been correcting their scale of the universe; it is now twice as large as was previously thought although the size of our galaxy is not affected. Also, until recently, it was thought that the many known types of stars, ranging from the tremendous supergiants down to tiny white dwarfs, were uniformly mixed in the galaxies. It has now been proved that galaxies contain two distinct star populations, which tend to be segregated. There is also new evidence that points to galaxies tending to cluster together to form super-galaxies, instead of being randomly distributed.

The change in the scale of size of the universe is the result of the

discovery of errors in the measurement of the distance of objects far from our own galaxy. No single method is used to measure interstellar distances and a chain of connected methods allows astronomers to extend their measurements to the furthest limits of present day telescopes. However, one link in the chain proved to be weak and gave rise to serious errors. These are now being eliminated and astronomers forced to rebuild. But the rebuilding has resulted in a stronger structure, for other discrepancies, such as the difference between astronomers' and physicists' estimation of the age of the Earth, have also been removed.

Knowing the distance of the Earth from the Sun enables the distances of the nearer stars to be found by a method similar to that used by a land surveyor using a theodolite, except that the diameter of the Earth's orbit round the Sun is used as a base line. Measurements must be very accurate and are only reliable for stars less than 700 light years away.

More distant stars have to be measured by indirect methods. If the apparent brightness of a star

is large enough, its spectrum can be analysed and its distance worked out by comparing the intensity of the lines in its spectrum with those of a nearer star whose distance has been measured by a direct method. Although this method is very accurate it cannot be used for faint, distant stars as we do not receive enough light from them to obtain an accurate analysis of their spectrum.

Very much greater distances are measured using the properties of the remarkable stars known as Cepheid variables. They are very bright stars, some hundreds of times brighter than the sun, and are peculiar in that they wax and wane with clock-like regularity. Each one varies its brightness in a characteristic manner, the whole taking between 3 and 45 days. This is because they are not stable and their internal pressures are not balanced by the weight of their surfaces. This causes pulsations and the whole of the star blows up like a balloon and then collapses, the larger its size the longer the cycle.

About 40 years ago, 25 Cepheid variables were discovered in the smaller of the two clouds of stars known as the Magellanic Clouds, our nearest neighbours outside this galaxy. When these Cepheids were arranged in order of increasing time of pulsation it was found that they were automatically arranged in order of increasing *apparent brightness*. As they were all in the same cloud, which is immensely distant in comparison with the distance between the stars in it, all these Cepheids can be considered as being the same distance away from us. This means that their *apparent brightness* is proportional to their *absolute brightness* which is, in turn,

connected with its period of pulsation.

Consequently, the ratio of the distances of any two Cepheids can be calculated by comparing their brightness. Once the actual distance of any one Cepheid is known then those of all others can be calculated from their periods and apparent brightnesses alone.

The difficulty lay in finding the distance and brightness of one Cepheid to be used as a standard; even the nearest one is 600 light years away and they are all somewhat obscured by interstellar dust. Anyway, this was eventually done and the scale of the universe built up from the period-brightness relationship of Cepheids. There lay the error.

During the calculations using these figures it was found that all galaxies are moving away from ours and that the speed with which they are doing so is related to their distance. Their speeds were found by using the fact that the spectral lines of distant galaxies are shifted towards the red end of the spectrum, much as the note of a train whistle is lowered when it is moving away from an observer.

This again gave us another step forward in our measurements of the universe; it is used to find the distances of galaxies so remote that individual stars cannot be detected but the change in their combined spectra can be determined.

The centre of interest now turns to Mount Wilson where Dr. W. Baade took advantage of the wartime black-out of Los Angeles and Pasadena, the sky being free of the artificial light that usually fogs sensitive photographic plates, to test special photographic emul-

sions very sensitive to red and blue light. Using the 100 inch telescope with the blue sensitive plates he could only obtain blurs when he photographed the nucleus of the Andromeda galaxy. But, with the red sensitive plates, he was able, for the first time, to pick out separate stars in the centre of that galaxy. He was surprised to find that these are all cool, red stars and that all the very hot, blue stars are concentrated towards the edge of the galaxy, particularly in the spiral arms. He recognised that there were two different types of stellar population and he called them Population I and II, the most important astronomical discovery of this generation.

Population I is made up of very bright and massive hot, blue stars, 100,000 times brighter than our sun. They are found together with supergiants, open star clusters and Cepheid variables. Population I stars, together with a few Population II stars, are always found in the spiral arms of our and similar galaxies but never near the nucleus. They are always associated with vast clouds of drifting gas and dust particles from which stars are still being formed. They are all young stars, not more than 1,000 million years old and have been condensed from interstellar dust rather than from interstellar gas. New born stars are replacing the older, dying ones and a steady state of birth and death, one balancing the other, has been reached.

The centres of spiral galaxies and spherical systems, such as globular clusters, contain only Population II stars. There is none of the intensely hot bright blue stars, the brightest ones are cool red stars only 1,000 times as

bright as our sun. Population II stars are faster moving and older than Population I and were made from interstellar gas before it had a chance to condense into dust clouds. There are no remaining gas clouds and there is no replacement of stars as they die. Our sun is a Population II type even though it is in the middle of a Population I part of this galaxy. Population II contains bright red giants, subgiants and cluster type variable stars.

The latter have short periods of pulsation, only 10 to 15 hours. They have high velocities and are white or red in colour. Like the Cepheid variables, their brightnesses are also related to their periods.

Baade accordingly expected that the centre of the Andromeda galaxy should contain cluster type variables and it was calculated that these should just be bright enough to show up on photographs taken with the 200 inch telescope on Mount Palomar. But, when Baade looked for them, he couldn't find a single one on his plates. As it was unlikely that the Andromeda galaxy had a unique structure, the only explanation was that it was at least twice as distant as was previously thought and that the stars therefore appeared to be dimmer. He thought that the error had most probably occurred in the calibration of the Cepheid variable period-brightness ratio.

This was confirmed by photographs of the near, short period, cluster type variables in the Magellanic Clouds. It was found that the previous figures for their distance was about half the new one. Further confirmation came from a new study of many Cepheid variables, all within 2,000

light years and relatively unobscured by dust clouds. From this and the comparison of the brightness of globular clusters of stars in this galaxy with those in the Magellanic Clouds it was decided that all old extra-galactic distances had to be doubled.

The Magellanic Clouds are now believed to be 160,000 light years away, instead of 80,000. The error was due to the fact that Cepheid variables are found where there is a great deal of dust that cuts down their apparent brightnesses. This interstellar dust is irregularly concentrated in great clouds and it is difficult to correct for its variable distribution. The mass of this dust in each galaxy may well be greater than the combined masses of all the stars.

This change in the distance scale of the universe means that the 200 inch telescope on Mount Palomar has a range of 2,000 million light years instead of 1,000 million. Objects at this extreme range are seen as they were 2,000 million years ago, the time the light has taken to reach us.

The size of our galaxy is not affected, all the distance measurements inside it were carried out using methods which do not depend on the brightness of Cepheid variables. But the size as well as the distance of all other galaxies must be doubled and our galaxy is no longer unique in being the largest. This uniqueness had always puzzled astronomers, who doubted that our galaxy should be very much different from the other 1,000 million that are known. Even the Andromeda galaxy is

now certainly much larger than ours.

By calculating back to the time when all galaxies were close together, the age of the universe was fixed at 2,000 million years. But evidence based on the rate of decay of thorium and uranium on the Earth gives an age of 3,000 to 3,500 million years. The Earth cannot be older than the universe so it was apparent that somewhere there was an error or fallacy. The new figures for the size of the universe make its age 4,000 million years, very much better agreement than was previously attained.

It is only a hundred years since astronomers' measurements were confined to the Solar system. Perhaps in another hundred years astronomers themselves will not be confined to the Solar system. If the dream of interstellar travel is ever realised we now know that we are more likely to find older suns, probably with planets capable of supporting civilisations, towards the centre of the galaxy. But any long term policy of colonisation will, when the older stars are dying, tend to move from the centre of the galaxy towards the newer Population I types, in the edges, that have calmed down and reached maturity.

Perhaps that is why our sun, a yellow stranger amidst the harsh, bright blue stars hemming it in at the rim of the galaxy, has yet to be visited by alien surveying ships; the average age and development of stars in this section of space is too small to interest others.

JOHN NEWMAN

The Facts About Hypnotism

In this article, specially written for "Nebula", Mr. Powers explains some of the mysteries of that fascinating yet little known subject, Hypnotism

Our first article about hypnotism appeared just shortly before the announcement in the national press that hypnotism is now available to the public under the auspices of the National Health Service.

No-one can accuse Nebula of being behind the times!

Now that the British Medical Association has taken this momentous step, and hypnó-therapy has been officially recognised, and has achieved the dignified status of an established science, more people than ever before are asking, "What exactly *is* hypnotism, and how can it help?"

Much printers' ink was splashed by the newspapers in consequence of the Medical Board's decision, but even Medical subscribers seem shy of committing themselves to a theory. Apparently they know that if they do thus-and-so, such-and-such is the result, but they are unable, or do not care, to say why; and the public awaits an explanation.

When the human mind is the field of exploration, the most brilliant of researchers can only de-

duce and theorise—it is very hard to establish facts. Practically the whole of the modern school of psychiatry is founded largely upon the theories of Freud; yet these theories have never actually been proven. In the case of hypnotism, the very nature of the subject led many eminent investigators into erroneous conclusions, and was responsible for the breach and disagreement between the rival Continental schools of Salt-petriere and Nancy.

It would seem, therefore, that the writer's own theories, founded on years of experience and research, should be at least as worthy of hearing as anyone's else; so I here present them, and the reader may judge of their logicity and worth.

First of all, if no occult factor is involved, and no dominance of will, how is it that one person can cause another to enter a sleep-like state, merely by suggesting that he should do so?

The answer is "Applied Psychology".

We all know that certain conditions are conducive to sleep; a

warm fire, a cosy chair in a quiet room; nothing—such as a book, or television, or an important task, claiming our attention—and sleep comes easily. Or, picture a warm summers' afternoon; soft sand or grass; waves rhythmically beating the shore, or a breeze whispering among the tree-tops; here again, it is easy to relax, more and more, until finally we slumber.

The hypnotist induces this predilection for sleep, or an atmosphere favouring it, by his own methods. Softly his voice suggests—calm, peace, relaxation; and certain physical symptoms which predispose sleep.

Thus: "Your eyelids are growing heavy—it is an effort to keep them open—you blink—let them close. You relax more, you let yourself sink deeper into your chair," and so on. With a susceptible and willing subject, it is entirely logical that these suggestions should have the desired effect; that the subject should, in fact, fall asleep. Why not?

Perhaps one of the most remarkable aspects of hypnotism is that so many scientific and logical investigators, such as those of the medical profession, could not perceive this simple and logical fact long ago!!!

So far, I think you must agree that nothing at all extraordinary is involved; so, you think: "Ah! The extraordinary part comes after the subject is asleep!"

Well, what happens?

Example: *The subject talks in his sleep!*

So do any amount of people.

The subject laughs, cries, sings, recites, in his sleep!

So do any amount of people.

The subject stands, walks, in his sleep!

So do somnambulists.

The subject's eyes open, yet he still sleeps!

The eyes of many somnambulists are open.

The hypnotic subject sees things which aren't there, believes in situations which aren't real!

So does any dreamer.

But the subject of hypnotism does these things because the HYPNOTIST suggests them!

The dreamer does these things because his SUBCONSCIOUS suggests them.

Basically, then, the difference between hypnosis and what we may term "Ordinary sleep," is as follows:—

In ordinary sleep, the workings of the subconscious mind causes dreams, and in some cases—somnambulism—the sleeper may enact these dreams.

The hypnotic sleeper allows his subconscious mind to lie in abeyance. A transference has been effected—one might say a transference of egos. The subject in hypnosis allows his own ego to remain in the background, submerged; and accepts the suggestions of the hypnotist for his dreams, instead of their being the result of the workings of his own subconscious mind. He then enacts these dreams. He is, in fact a somnambulist directed by the hypnotist—*within limits*.

He will not do anything directly in opposition to his own strong religious, ethical, or moral beliefs. Some hypnotists have tried to disprove this by "tricking" their subjects into doing "criminal" actions, such as "murdering" with a cardboard dagger.

They have proved nothing. The subconscious mind never sleeps; and I contend that the subconscious mind of the subject *knows*

that this "crime" is not real, that it is only a mock-up; that the dagger is cardboard, the gun loaded with blanks.

Thus a girl will "murder" with her cardboard dagger, but refuse to disrobe. I am told that a girl once did, under hypnosis, disrobe on being told by the hypnotist that she was to do so to take a bath. The postulation still holds good. If she genuinely believed she was about to take a bath, she would naturally believe herself to be alone; therefore, by disrobing she did not contravene any moral ethics. But if any overt move had been made by the hypnotist, I guarantee that she would have resisted him as she would any intruder of her bathroom!

I do not believe that any reputable hypnotist would stoop to trickery of this kind, any more than the incidence of offences by dentists while their patients are unconscious by gas; but such fears need not deter anyone from submitting to hypnotherapy—the remedy is so delightfully simple. Just take along a friend to see fairplay!

To hark back to the question of the "transference" of egos. Just how and why is this effected? Once more, the answer is so simple that again I wonder at the lack of perception displayed by scientific investigators; the person who falls asleep by himself, of his own volition, is obsessed by himself; the person who falls asleep at the suggestion of a hypnotist, does so, obsessed, as it were, with the hypnotist and the idea of the hypnotist. *Voilà!* The transference is accomplished, and the rapport sustained throughout the hypnosis.

What of post-hypnotic suggestion? Here, the suggestion of the

hypnotist is carried over into the waking state, but is not remembered by the subject until it is triggered into his consciousness by some such stimulus as a clock striking, or perhaps the hypnotist snapping his fingers; or saying a certain phrase. The situation is analogous to the person who remembers nothing of a dream he has had, until some occurrence, or chance remark, causes him to exclaim, "That's odd! I remember now—I had a dream last night."

What of the subject's being able to hold a limb extended, in what would ordinarily be a very fatiguing position, for abnormal periods of time without apparent fatigue? I think that the answer to this question is, that the position is not really as fatiguing as we imagine, and that only the consciousness of sustained effort makes it seem so. Proof? I have seen a schoolboy, bored with attempting to engage his teacher's attention, return his own attention to his books; leaving his hand and arm in the raised position in the hope of his teacher's eventually noticing it; and keeping it there for an astonishing length of time—having forgotten all about it; and sometimes having forgotten the reason for its being there when the teacher has at last said, "Well, Jones?"

Let us now consider rigid catalepsy. A subject's whole body may, by suggestion, be rendered as "stiff as a board", whereupon his head and shoulders may be placed upon one chair and his feet and lower legs on another, with nothing supporting him in between, save his own muscular rigidity; and in this position he can even sustain the weight of the hypnotist sitting on the subject's midriff. Why?

Because, obviously, we are much stronger than we believe. The hypnotist has not miraculously imbued the subject with abnormal strength. Only the subject's own inhibitory thought of the "impossibility" of the feat prevents his performing it in the ordinary waking state. A man in an epileptic fit is prodigiously strong. A man crazed by anger, or under some other emotional stress—as, for instance, the necessity of shifting a weight in order to free a workmate—will perform feats of strength far beyond his ordinary capability.

Lastly, what can hypnotism do to help and heal, and why? Or, rather, How?

Here we explore a fertile field, rich in possibilities and extending to vistas of which the limits are as yet unknown. To enumerate a few: analgesia to pain, when anaesthetics are precluded because of some physical reason; curing of phobias and bad habits; restoring of personal confidence and will-to-live; curing of stuttering, hysterical paralysis and blindness and dumbness (usually caused by shock); curing of "nerves" and "examination nerves"; curing of bed-wetting, and even eczema; of stomach ulcers and other "stress" complaints. Finally, the curing of organic diseases.

Why, and how, are these seeming miracles possible? Firstly, because of the unrealized power of the mind over the body, and of a much closer mind-body association than was formerly believed. It has been discovered that when an idea has been implanted in the mind by hypnotism, the body will often realize this idea in its own

way. Thus, warts are cured by suggestion, apparently because the blood cells in the adjoining tissues cut off their supply. Conversely, a defined area will redden by dilation of the blood cells when it is suggested that great heat is being experienced there. Symptoms of nettle-rash may be evoked quite rapidly. Who dare define the limits of such treatment?

Why should ideas implanted during hypnosis be so much more effective than at any other time? Because in hypnosis we have the most acute condition of attention. Dissociated from the myriad distractions of the waking state, the mind receives, and focuses its attention upon the suggestion, with the receptivity and power of millions of brain cells which might otherwise be occupied with the trivia of sight, sound and smell. "How-do-I-look? My-shoes-pinch! What-for-dinner?" and so on to infinity. Rather a loose way of expressing it, perhaps, but you get the general idea.

* * *

In the light of all we have discussed here, let us now stand back, as it were, and examine the entire concept of hypnotism.

Have we here the secret of many of the miracles of healing wrought by the prophets, by Christ and his disciples, by modern faith healers; and of such localities as Lourdes?

Some modern thinkers of the Church believe so, quite devoutly, on the grounds of Christ never, while on earth, using any power not available to any man. Hypnotism may well be the answer. (Finis.)

W. H. POWERS



Something to Read..

New Hard-Cover Science-Fiction Reviewed by

KENNETH F. SLATER

That prolonged and sticky spell in August almost made me wish that John Boland's very realistic **WHITE AUGUST** (Michael Joseph, 10/6, 239 pp.) would come true—in part, anyway. A small fall of snow to cool me off would have been just right. Of course, the weather-war in Mr. Boland's novel has radio-active snow, which threatens to destroy Britain through disruption of traffic and its consequent fuel and food shortages long before the radio-activity reaches a lethal level. Compared with **THE SKY BLOCK**, Steve Frazee's (Bodley Head, 9/6, 192 pp.) novel of similar trend, **WHITE AUGUST** is somewhat slow; the action is not so intense, nor so exciting. However, Mr. Frazee limits his scope to the essential characters of the various government branches and armed services who are trying (when not shackled down with their own interdepartmental red tape) to capture a "Weather-wrecking" machine which is bringing unending drought to the American Middle West. Spies and counter-agents, civilian Platt Vencel co-opted for his local knowledge, Colonel Catron in charge of the combined op; these and few others in a small area of land form the players and scene for **THE SKY BLOCK**. Mr. Boland plays on a bigger field, and so has more incident—oft-times trivial—which tends to

slow his story down. Both are the antithesis of space-opera, and well worth reading.

But George O. Smith's **HELLFLOWER** (Bodley Head, 9/6, 250 pp.) is space-opera, not very pure or simple. The Hellflower is a flower-drug, by which some triple-toned (vocally) aliens are undermining the Solar culture; an undeclared, underhand war. Charles Farradyne, a boy-scout space-pilot who lost his honour, is engaged (unofficially, of course) to track down the drug-ring, and uncovers the extra-Solarian nature of the affair. Hampered by a drug-fiend female, the distrust of both sides (both Solarians and the aliens are gunning for him in the later stages of the brawl) he finally manages to win peace with honour for both sides, and a certain amount of kudos (not forgetting the d-f-female, now cured) for himself. Exciting, but shallow and lacking the technical gadgetry which goes a long way towards making a George O. Smith yarn worthwhile.

Space opera on the grand scale is expected from Isaac Asimov, and his **THE CURRENTS OF SPACE** (Boardman, 9/6, 217 pp.) fulfils expectations. The theme is the same as that of **HELLFLOWER**—"little man done wrong makes good", but the treatment and story are utterly different and (in my opinion) on a far higher level. The story is

too complicated to be served out in precis form, but the ground-work is a discovery by a "Spatio-analyst" of a threat to a certain planet; its sun is going nova. This planet is the key to a commercial empire, the farm-world for a galactic-wide product controlled by the Overlords of Sark. You can see the political skullduggery, the sociological theorising, immediately available to master-craftsman Asimov. And well spiced with some exciting chases, battles—both gun and verbal—and a splash of romance, it makes a very readable story.

ANGELO'S MOON, by Alec Brown (Bodley Head, 9/6, 221 pp.), is something different. I found this a little hard to start, but once started, I read it straight through. A highly technocratic culture, developed on the lines of a city-state, is threatened when its intensive cultivation is overrun by monstrous weeds. Recalled from his post on a satellite station, Dr. Angelo Gardiner is placed in charge of the efforts to save Hypolitania. Hampered by inter-group politics, he recognises that the answer may be in the methods of intensive cultivation, and seeks to obtain knowledge from the "uncivilised barbarians" (anyone who doesn't live in Hypolitania) outside. Some knowledge and aid he does get, but his efforts are thwarted by the ingrained traits of his own people, who rush madly onwards towards destruction. Angelo himself, one of the few Hypolitanians who might be able to dwell outside, retires to the satellite after the debacle preferring to die with his world, despite appreciating its wrongful path. Mr. Brown is to be complimented on making a very successful story out of a somewhat difficult theme. It would have been

too easy to slip into a straight satire (of the Coblenz type) with this story. Happily, he avoided this trap. He did not, however, avoid that other trap into which fall too many established novelists, attempting a science fiction story. The book is loaded with "invented" words and terms, which he has explained in far too many footnotes to the pages. There are even a couple in the last but one chapter!

Now some swift short notes. . . . ALIEN LANDSCAPES: Jonathan Burke (Museum Press, 8/6) contains six of his short stories, of which I'd grade two good, two average, and two mediocre. It was perhaps unfair to Mr. Burke to collect his stories this early—the good ones are good, and the others suffer by comparison. William F. Temple's MARTIN MAGNUS, PLANET ROVER (Muller) is aimed at the juvenile public, but should not be overlooked. The character Temple has created in Magnus delighted me. THE MINDWORM: C. M. Kornbluth, will be coming from Michael Joseph in October, containing twelve of Kornbluth's best. THE CHRYSALIDS, by John Wyndham, should now be out from the same publisher. The American title is REBIRTH, under which title I read and thoroughly enjoyed a somewhat different treatment of the mutant theme. LEST DARKNESS FALL: L. Sprague de Camp, is the rewritten and lengthened version of that fantasy classic from Unknown. This too should now be available from Heinemann. And for your general information, science-fiction is still sufficiently important in the publishing world to earn a page to itself in an Autumn issue of THE BOOK-SELLER.

SCIENTIFILM PREVIEWS



News and advance Film Reviews Direct from Hollywood's

FORREST J. ACKERMAN

Something new has been added on the scientifilm scene: they're actually *making* sci-fi films in quantity rather than just talking about them. (That other factor, quality, still remains a desired quantity; but they can't all be bad, as *THE BODY SNATCHERS*, which I'll review in a minute, is not.) The situation will soon be such that I'll have to review two or even three new productions every issue of *NEBULA*, considering that principal shooting has been completed on "Forbidden Planet", "1984" and "Tarantula!", and such scripts are set for shooting as "The Day the World Ended", "The Phantom from 10,000 Leagues", "The Attack of the Flying Saucers" (Curt Siodmak) and "Giganturo" (Frank Quattrocchi).

Some years ago those two old cronies of the macabre, Karloff and Lugosi, co-starred in a horror classic, Robert Louis Stevenson's *The Body Snatchers*. The new film of the same name is in no way derivative from the latter, but falls more in the category of "Beware, the Usurpers!", "The Puppet Masters", "Shadows in the Sun" and *Who Goes There?* Authored by sci-fi slickster Jack Finney, it was first featured as a serial in *Collier's*; pocketbook publication by Dell soon followed; and motion picture production was rushed.

Wendayne, my wife, and I caught the sneak preview of *THE BODY SNATCHERS* at the Westwood Theatre. The Westwood is notorious for a sophisticated, cynical preview crowd, drawn largely from collegians at the nearby University of California. They laughed, alright; and afterward a perplexed producer Walter Wagner asked me in the lobby, "Why did they laugh?" I'm happy to say, tho, the audience wasn't snickering at the sci-fi element, but merely the overdone *love*, and a lot of the latter can easily be lopped out before general release. In the face of imminent personal danger and world catastrophe, the hero and heroine spent a little too much time playing patty cake and smooching.

Ninety-nine per cent of the way the film faithfully adheres to the plot of the book. This is such a remarkable accomplishment that I think it is worth emphasizing or you might gloss over it. Did you hear me, reader? *They filmed the book!* They didn't buy a great story like *WHO GOES THERE?* and then destroy it, and then change the name so there was scant point in purchasing the title in the first place; they didn't take a book like *THE CONQUEST OF SPACE* and debase it; they didn't butcher a beautiful masterpiece like *THE FOUR-SIDED TRIANGLE*; no, praise the 9

billion names of God, they filmed what they bought!

What Walter Wanger bought wasn't the newest plot in the world—neither was "The Puppet Masters", which John Payne tells me he'd like to film—but there was a vitality in the telling that translates tellingly to the screen.

People here in a small community in California start going to their doctor and hesitantly but insistently confessing to him a strange concern; they're certain their uncle isn't their uncle any more, a little boy refuses to accept his Mother as Mom. Yet a week later the strange symptom passes and relatives are acceptable again for what they've always been.

Is some subtle monstrous metamorphosis going on among the townspeople, or is there some mass hysteria at work here? The doctor discusses the problem with a psychiatric friend and with his girl friend.

A part of the way thru the picture it looks pretty certain that there's something supranatural to it, but the audience is cleverly played with, a la John Dickson Carr, so that convictions are challenged, explanations suddenly seem doubtful.

But long before the hair-raising climax is reached there's no doubt at all about our being invaded by—don't laugh (you won't when you see it pictured)—seed pods from space. Sentient polymorphs, replacing human beings one by one until the entire citizenry has become doppelgangers from the void.

I don't take these things seriously, but the ending scared my wife to pieces. It builds up a gripping emotional effect. Finney pulled a real fine rabbit out of the hat—or seed out of the pod—in

the conclusion of this book, but the schlua (shock value) of the movie's ending will glue you to your seat. Science fiction fans should be pleased with this picture, and pleased that "normal" people may be expected to get a kick out of it too.

As for THE BEAST WITH 1,000,000 EYES, I am afraid this will never be a best seller. My very good friend (and client, for that matter) Paul Blaisdell created and operated the hand puppet (does that make him a puppet master?) that menaces the people in the picture, and as a matter of fact the inanimate Beast is here in my office, balefully glaring at me even as I type these words. Still, I can call the picture no master —

But hold! What strange hold is the Beast taking upon me? Those eyes! They fasten upon me hypnotically! A strange power invades my mind, penetrates to my finger tips! Fascinatedly, helplessly, I watch myself write: THE BEAST WITH 1,000,000 EYES is a masterpiece beyond compare! It is greater than "The Man from Planet X", superior to "Invaders from Space", tops "Robot Monster" and will outgross "Devil Girl from Mars" (The Beast has spoken).

Shall I shoot myself now?

Plot is vaguely reminiscent of *The Revolt of the Birds*, except that all animal life on the isolated farm where the film unfolds, including cows and chickens, gang up on the people. Actually the attacks of the birds are pretty effective and frightening, but tend to become repetitious. Theme is that a brain-eater from space, that can inhabit any body, gives a small group (that's a group of people) a bad time before the creature gets its come-uppance.



WALTER WILLIS writes for you

All unknown to the mundane world, a unique little occasion took place in Dublin one Monday evening late in July. In the cabin of a tramp steamer in the dock area five science fiction fans from various parts of the United Kingdom sat talking excitedly while the boat got ready to sail for Baltimore, U.S.A. Two of them were Ken and Pamela Bulmer of London, who were having their fare across the Atlantic paid by contributions from the rest of fandom. The others were English fan Chuck Harris, my wife Madeleine and myself, who had come down to Dublin by train to see them off.

We'd all met at Eden Quay, near O'Connell Bridge, and then I took them on a tour round the central Dublin area. I'm afraid this was unintentional—I was really looking for St. Stephen's Green, which the IRA had apparently stolen and hidden somewhere since I was there last. However the English visitors liked Dublin, being particularly interested in the fact that the public notices were all in Irish. (I translated some of them for their benefit and Chuck affected incredulity. "If 'Oifig an Phuist' doesn't mean 'Gents'", he said gravely, "I did a very silly thing in the Post Office this morning.")

I tracked down St. Stephen's Green eventually, in time for us

to rest a while on the grass until it was time to go down to the docks. There we inspected the ship and decided it would probably last out the voyage, provided no one leaned too heavily against anything. Chuck took photographs of the historic occasion and then, having been unable to find any place to stow away, us visitors had to get off. Looking at the Bulmers waving to us from the rail of the ship I felt a sense of unutterable awe: this was the culmination of two years' work on the Transatlantic Fan Fund and I couldn't believe it was really happening.

There was still plenty to worry about too. On account of the dock strike the boat's sailing date had abruptly been advanced more than two weeks, so that Ken and Pamela were arriving in a strange country three weeks before the Convention at which they were to be guests, with very little money and no arrangements made for their accommodation. As soon as we got home, Chuck and I published a duplicated letter explaining the situation and airmailed it to a dozen fans on the East Coast of the United States.

It arrived three weeks before the boat, and the response was wonderful. Representatives of the Baltimore and Washington fans—

John Hitchcock, Bob Pavlat and John Magnus—met the Bulmers coming off the gangplank with two cars and detailed arrangements for looking after them until the Convention. But they'd hardly got properly introduced to one another when another welcoming contingent—Larry Shaw, Dick Ellington and Phyllis Scott—tore in from New York with another car and the key of a furnished flat. After an amicable tug of war the Bulmers regretfully allowed themselves to be torn away temporarily from their other hosts and driven off in triumph to New York. At the moment of writing they are comfortably ensconced in a flat lent by publisher Dave Kyle . . . one of those riverside ones you see in realistic American films, all foghorns, washing and people sleeping on fire escapes. They have so many invitations that one of the New York fans has appointed herself their social secretary and gives them a daily list of their engagements!

There you have one of the wonderful things about the odd phenomenon known as science fiction fandom: that you can go almost anywhere in the world and get a warm welcome. The Transatlantic Fan Fund is just an organised extension of this individual goodwill, a development of the private Funds that in previous years brought Ted Carnell to Cincinnati and me to Chicago. It's next aim is to bring an American fan to Britain, a thing which has never been done before. Most of us in science-fiction have reason to be grateful for the generosity of American fans, and here's a wonderful way to repay it. Contributions should be sent to me at 170 Upper Newtonards Road, Belfast, N. Ireland. The U.S. fan

to be brought over hasn't been decided yet, but there's a strong movement in Britain to invite Robert Bloch.

Incidentally it's not only the fans who have been helping. The professionals, including your own Peter Hamilton, have been more than generous with cash donations and gifts of artwork for Convention auctions, and I'd like to acknowledge their help here.

Hyphen 14, Chuck Harris, Lake Ave., Rainham, Essex. 42 pages, 1/- or 15c. per copy This is the only major British fanmagazine that hasn't been reviewed here before, the reason being that I'm usually largely concerned in it myself. However the present issue is entirely the work of my co-editor Chuck Harris, so I suppose I can stop discriminating against it for once. This issue is clearly and elegantly produced with many of Associate Editor Arthur Thomson's brilliant cartoons and contains lots of good material—mainly humorous and dealing as usual with science personalities rather than science fiction itself, including also Damon Knight's serious and destructive book review column.

Walter Willis

Writes exclusively

in every edition of

NEBULA

Science Fiction



Dear Ed.: Here are a few comments on the "Special Features" in NEBULA No. 12:

First, Ken Slater who says that Hobbits don't exist outside of Tolkien's book. Shame—was he never a little Wolf Cub? Hasn't he ever heard that if Wolf Cubs and Brownies don't do their good deeds for the day they are little Hobbits instead? Not outside of that mythology, Ken? Tut-tut.

Now for the readers' letters. Let's take Frank Clare first as he can be disposed of more quickly than Mr. Cazly. He said non-existent "Imagination". Now look, Frankie, I've four copies at least of that non-existent magazine sitting on my bookshelves right now. Don't tell me I've got a matter transmitter that actually manufactures something out of thin air . . . if I'd known about it before I might have been rich by now! "Madge", as she's known in the States, does very well indeed over there. Just because a magazine does not put out a British Reprint Edition doesn't say it's non-existent.

Now let me get at Mr. Cazly. Women are so utterly out of place in space-travel, eh? Now let me tell Mr. C. something. Women are, usually, (a) smaller than men, (b) able to endure more than men, so it is very likely that when spacetravel comes *they* and not men will be chosen to pilot the ships. Why? Because, my dear Mr. Cazly, (a) they will need less fuel, less food, less oxygen and

less water, therefore the rocket can be smaller, or, with the size that would be used for a man, go further with a woman piloting it. And as (b) women have a larger layer of subcutaneous fat they can stand more cold—which may be necessary—and being able to endure more, generally speaking also, will probably be far more satisfactory in space than ever men could be. Many women have been pioneers—Florence Nightingale for instance—or have tolerated conditions that men only just bore—the "Angel of Dien Bien Phu".

So, Mr. Cazly, don't be so snobbish about women. After all, were it not for a woman, you would not have been able to have written that letter. Which reminds me, how are you going to colonise a planet without women? Huh?

JOY K. GOODWIN,
London, S.E.6.

** Okay, Joy, you women go off and conquer space and leave us men to read our science-fiction in peace.*

THE HAPPY MAGIC OF

● **FRIENDSHIP** ●

PEN — PERSONAL —
LIFE PARTNERSHIPS

All ages. All districts. Photos.
Send 5d. stamps for fascinating
details and free photogravure
book to

EDNA HANSON
DENTON, MANCHESTER

ONE GUINEA PRIZE

To the reader whose Ballot Form (below) is first opened at the NEBULA publishing office.

All you have to do, both to win this attractive prize and to help your favourite author win the 1955 Author's Award, is to number the stories in this issue in the order of your preference on the Ballot Form below and post it to "Nebula," 159, Crownpoint Road, Glasgow, S.E., immediately.

Pushover Planet	
The Beautiful Martian	
Quis Custodiet	
Question Answered	
Down, Rover, Down	
Sunset	

Name and Address

Mrs Irene Boothroyd of Huddersfield wins the One Guinea Prize offered in NEBULA No. 12. The final result of the Poll on the stories in that issue was:—

1. DECISION DEFERRED
By David S. Gardner 28.0%
2. REPORT ON ADAM
By E. R. James 19.1%
3. THE JOURNEY ALONE
By Bob Shaw 16.0%
4. REBELLION ON THE MOON
By Robert A. Heinlein 12.8%
4. AN APPLE FOR THE TEACHER
By Jonathan Burke 12.8%
6. THE GREAT TIME HICCUP
By Brian W. Aldiss 11.3%

The result of the Poll on the stories in this issue will appear in NEBULA No. 16.

Dear Ed.: "Decision Deferred" was quite pleasant reading but no more than that. The story seemed to lack any real depth of atmosphere. "Mark Levere" is the same old stereotyped hero one can find in HOTSPUR upwards. And, then, to add insult to injury, "Gail" has to return to him in the end. Tsk, tsk, tsk... Rating: 5.

"Report on Adam": This was quite a good story. The only complaint I've got is why did Adam's mate have to come from a cube? No purpose seems to be served by this. If those whose purpose it was to punish him wanted to give Adam a mate, then surely it would have been better to have "grown" and trained her before giving her to Adam? Why make it harder for the bloke to stay alive by saddling him with an almost-adult girl with the mind of a baby? And no consideration is given to the psychological effects on the girl. Rating: 4.

"Rebellion on the Moon" would have been quite good if I hadn't read it all many, many times before. I'm surprised to find Heinlein writing such a hacknied plot. What gets me about this type of story is why should the organizers of such gigantic plots as the taking over of earth, care a Tinker's Cuss about the opinions of two-bit junior space-officers like "Johnny Dahlquist"? It doesn't ring true at all. Rating: 6.

"The Journey Alone" was, I think, the best story in the issue. It has a few faults but I found it pretty original. Rating: 1.

"An Apple for the Teacher": All I can say about this is that I wish it would happen to me: Rating: 3.

"The Great Time Hiccup" was enjoyable. I'm not usually very

keen on stories dealing with time because we know so very little about it that the author can do almost anything he likes to get the hero out of an awkward situation. I think I enjoyed this story because there was no real hero. Rating: 2.

The cover was quite nice, but I'm a bit tired of spaceships on alien landscapes. Something on the lines of the back cover, done in full colour, would have been better. NEBULA'S covers often look all too much like stills from "Destination Moon."

Departments (particularly "The Electric Fan" and "Scientifilm Previews") were all interesting. However, I do wish you'd print the full addresses of writers in the letter-section.

MIKE WALLACE,
Hull.

* *Thank you very much for such a detailed and interesting letter of comment on my last issue, Mike, I just wish all my readers would take the trouble to be so specific, as this helps me to know exactly what everyone wants to see in Nebula so that I can go right ahead and print it!*

Of course, for those who can't find time to write, there is always the Ballot Form.

Dear Ed.: Here is a talking point for "Guided Missives." You will, of course, have followed the work being done on E. S. P. and Tele-kinesis at Duke University, under the able direction of Dr. Rhine. It has occurred to me that we may have a very good example of Tele-kinesis with us in our everyday life.

In professional football, it is a well established fact that the home



Return to Mars

*A new adventure
in space by*

**CAPT. W. E.
JOHNS**

Here is the second adventure of Group Captain "Tiger" Clinton, D.S.O., R.A.F., his son Rex, and Professor Lucius Brane; in which once again they set out in Spacemaster II to reach the Red Planet.

Also available

**KINGS OF
SPACE**

Illustrated 7/6 net each

HODDER & STOUGHTON

team wins more often than not. Let us examine this for a moment. No man can earn a place in a League team without above average talent. Why then should it make such a marked difference which particular piece of grass he is called upon to exercise that talent? Can it be that the supporters have a collective force which helps the ball to swerve into the opposing goal and out of the home goal?

To take it a little further, local derbies are often drawn games. Is this the result of a more even balance in the will of the spec-

tators? And Cup-ties played on neutral grounds show similar uncertainty.

Perhaps other readers have noticed corresponding effects in other games? For instance, I met a billiards player some years ago who claimed that he could win those games in which he took the trouble to "will" the ball to run in his own favour.

CLEMENT BATSON,
Huddersfield.

** Well, let's all concentrate on making NEBULA leave the news stands twice as fast as usual!*

LOOK HERE—from page 2.

hoped rather, that this venturing into the unknown, which has been the dream of every science-fiction reader since this type of literature was born, will have a maturing influence on all Mankind and that the current (as I write) lessening of international strife will mean the beginning of a new era of space travel, discovery and colonisation, unmarred by the evils of war and militarism which have brought the whole human race to the very brink of disaster.

* * * *

Talking of international strife reminds me of the account of a friend in the Columbia Pictures Corporation who was at Imst, a little town in the Austrian Tyrol for the filming of "The Gamma People," science-fiction movie starring Paul Douglas and Eva Bartok.

Apparently Imst is on one of the main roads to the ski-ing resorts of Austria and Switzerland and so an international group of holiday-makers was always on hand to watch the filming. Questions which seemed to characterise the various nationalities were:

The French: "Where is Eva Bartok?"

The Americans: "Are you using *real* gamma rays in this movie?"

The Austrians: "Why use Imst? Our home at . . . is much prettier".

The Germans: "Where did you buy those cameras?"

The British: "How much did this film cost?"

The Spanish: "Where is Eva Bartok?"

Peter Hamilton

Now ready!

FIRST LENS MAN

by E. E. SMITH, Ph.D.

In FIRST LENS MAN the reader is transported to the day in the not-too-distant future when fleets of commercial space ships travel constantly between the planets of numerous solar systems. But with interstellar commerce come interstellar headaches. The forces of law and order lag far behind those of organised crime.

FIRST LENS MAN is the second novel in that epic without parallel in science fiction—*The Lensman Series*. 308 pp. Frontispiece. 9/6

SELECTED TITLES STILL AVAILABLE

ALIEN DUST - - - - E. C. Tubb

THE CURRENTS OF SPACE - Isaac Asimov

THIS ISLAND EARTH - Raymond Jones

write for full list to:

T. V. BOARDMAN & CO., LTD., 14 Cockspur St., London, S.W.17



FATE

100 Thrilling Pages
1/- Monthly

New! TRUE Stories of the Strange and Unknown, probing to-day's Unsolved Mysteries. A Magazine that is DIFFERENT! Every Story True . . . raising new speculations, new discoveries about Time, Planetary Travel, Pre-existence, Other Worlds, etc.

Order now from your Newsagent 1/- or 1/2 post free from:
FATE MAGAZINE, The Manor House, Worcester Park, Surrey
(13/6 post free per year, 6/9 for six months)

Ask Your Newsagent to show you FATE !

